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A

TREATISE

ON THE

DECORATIVE PART

OF

CIVIL ARCHITECTURE.

ILLUSTRATED BY

FIFTY ORIGINAL, and THREE ADDITIONAL PLATES,

Engraved by Old ROOKER, Old FOUDRINIER, CHARLES GRIGNION, and other eminent Hands.

By SIR WILLIAM CHAMBERS, K. P. S.

Surveyor General of HIS MAJESTY'S Works; Treaſurer, and Member of the ROYAL ACADEMY of ARTS in London; alſo of thoſe of Paris, and Florence.

FRS. FAS. FSSS.

The THIRD EDITION, conſiderably augmented.

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M.DCC.XCI.

TO

THE KING.

SIR,

THE preſent publication treats of an Art, often the amuſement of YOUR MAJESTY's leiſure moments; and which, in all ages, great princes have delighted to encourage: as one, amongſt thoſe moſt uſeful to their ſubjects; beſt calculated to diſplay the power and ſplendor of their government; fitteſt to convey to poſterity, the munificence, ſkill, and elegance, of the times in which they flouriſhed; the memorable events and glorious deeds, in which they were engaged.

THE indulgent reception afforded to the two former editions of this work, induced me, not only to enlarge, and attempt improvements, in this third Edition; but likewiſe to ſolicit the honour of its appearance, under the auſpices of YOUR MAJESTY's Patronage: and the condeſcenſion with which that mark of Royal approbation was granted, proves YOUR MAJESTY's deſire to promote, even the ſmalleſt advances, towards perfecting the Arts of Deſign.

THE inſtitution of a Royal Academy; an Exhibition, become ſplendid under Royal Patronage; Engliſh Productions of Art, contending for preeminence, with thoſe of the firſt Schools on the Continent; are events, unexpected, as unhoped for, till YOUR MAJESTY's Acceſſion.

FOR

DEDICATION.

FOR the benefits derived from theſe events, Artiſts of all degrees look up with reverence to the Throne: and ſo powerful is the Example, ſuch the Influence of Royal Patronage; that the ſame ſpirit of encouragement, has rapidly been diffuſed, through all claſſes of YOUR MAJESTY's Subjects; even men of inferior rank now aſpire to Taſte in the fine arts; and by a liberality of Sentiment, formerly unknown, excite the artiſts to emulate and excel each other: circumſtances not only much to their own honour, but contributing greatly to augment the Splendor of the Nation; to improve its Taſte, and ſtamp additional Value on its Manufactures; to extend its Commerce, and increaſe the Profits ariſing therefrom.

THAT YOUR MAJESTY may long Reign over happy nations, and continue with equal ardour a Patronage, which already has produced ſuch beneficial effects; is the earneſt wiſh of

YOUR MAJESTY'S

Moſt dutiful Subject,

And ever faithful Servant,

WILLIAM CHAMBERS.

PREFACE.

AMONGST the various arts cultivated in ſociety, ſome are uſeful only; being adapted to ſupply our natural wants, or aſſiſt our natural infirmities; others again, are inſtruments of luxury merely; and calculated to flatter the pride, or gratify the deſires of man: whilſt others there are, contrived to anſwer many purpoſes; tending at once to preſerve, to ſecure, to accommodate, delight, and give conſequence to the human ſpecies.

ARCHITECTURE, the ſubject of our preſent enquiry, is of this latter kind; and when viewed in its full extent, may truly be ſaid to have a very conſiderable part, in almoſt every comfort, or luxury of life. The advantages derived from houſes only, are great, they being the firſt ſteps towards civilization, and having certainly great influence both on the body and mind. Secluded from each other, inhabitants of woods, of caves, or wretched huts; expoſed to the inclement viciſſitudes of ſeaſons, and the diſtreſſing uncertainty of weather; men are generally indolent, dull and abject, with faculties benumbed, and views limited to the gratification of their moſt preſſing neceſſities: but wherever ſocieties are formed, and commodious dwellings are found; in which, well ſheltered, they may breath a temperate air, amid the ſummer's heat or winter's cold; ſleep, when nature calls, at eaſe and in ſecurity; ſtudy unmoleſted; converſe, and taſte the ſweets of ſocial enjoyments; there they are ſpirited, active, ingenious and enterpriſing; vigorous in body, ſpeculative in mind: agriculture and arts improve, they flouriſh among them; the neceſſaries, the conveniencies, and ſoon even the luxuries of life, become there abundant.

MERE ſtrength however, even the ſteadieſt perſeverance, obtains with difficulty the deſired produce; but inventions facilitate and ſhorten labour, multiplying productions ſo, as not only to ſupply domeſtic wants, but likewiſe to treaſure up ſtores for foreign markets.

ARCHITECTURE then ſmooths the way for commerce; ſhe forms commodious roads through marſhes or other grounds naturally impracticable, fills up vallies, unites, or levels mountains; throws bridges over deep or rapid waters, turns aſide or deadens the fury of torrents; conſtructs canals of navigation, builds ſhips, and contrives ports for their ſecure reception in the hour of danger: facilitating thus, the intercourſe of nations, the conveyance of merchandize from people to people.

A WELL regulated commerce is ever the ſource of wealth; and luxury has ever been attendant on riches. As the powers of gratification increaſe, fancy multiplies wants; till at length, indolence or pleaſure, vanity and ſuperſtition, fears and reſentments, give birth to a thouſand ſuperfluous, a thouſand artificial cravings; the greater part of which could not be gratified, without the aſſiſtance of architecture:

for ſplendid palaces, magnificent temples, coſtly dwelling houſes, amphitheatres, theatres, baths and porticos, triumphal arches and bridges, mauſoleums, and an endleſs number of ſimilar inventions; are all, either neceſſary inſtruments of eaſe and pleaſure; or ſtriking teſtimonies of wealth, of grandeur and pre-eminence, either preſent or paſt.

NOR are there any other objects, whether neceſſary, or ſuperfluous, ſo certainly productive of their deſign; ſo permanent in their effects, or beneficial in their conſequences: fine furniture, rich dreſſes, brilliant equipages, numerous domeſtics; are only ſecondary attractions at firſt; they ſoon feel the effect of time; and their value fluctuates, or dies, with the faſhion of the day. While the productions of architecture command general attention; are monuments laſting beyond the reach of modes; and record to lateſt poſterity, the conſequence, virtues, atchievements, and munificence of thoſe they commemorate.

THE immediate and moſt obvious advantages of building are, employing many ingenious artificers, many induſtrious workmen and labourers of various kinds; converting materials of little value into the moſt ſtately productions of human ſkill; beautifying the face of countries; multiplying the conveniencies and comforts of life.

BUT theſe, however great, are not the moſt conſiderable: that numerous train of arts and manufactures, contrived to furniſh and adorn the works of architecture, which occupies thouſands, and conſtitutes many lucrative branches of commerce; that certain concourſe of ſtrangers, to every country celebrated for ſtately ſtructures; who extend your fame, adopt your faſhions, give reputation, and create a demand for your productions; are conſiderations of the higheſt conſequence: in ſhort, the advantages of building extend to the remoteſt ages, and at this day, the ruins of ANCIENT ROME, in a great meaſure ſupport the ſplendor of the preſent; by the number of travellers who flock from all nations, to viſit the ancient remains and modern magnificence of that famous city; and who, in the courſe of a few centuries, have there expended incredible ſums of money, by long reſidence; and in the purchaſe of old pictures, antique ſtatues, buſts, baſreliefs, urns, and other curious productions of art: of which, by ſome extraordinary good management, there is a treaſure never to be exhauſted: the waſte of four hundred years is ſcarcely perceivable.

NOR is architecture leſs uſeful in defending, than proſperous in adorning and enriching countries: ſhe guards their coaſts with ſhips of war, ſecures their boundaries, fortifies their cities, and by a variety of artful conſtructions, controls the ambition, and fruſtrates the attempts of foreign powers; curbs the inſolence, and averts the danger, the horror of internal commotions.

THUS architecture, by ſupplying men with commodious habitations; procures that health of body and vigor of mind, which facilitate the invention of arts: and when by the exertion of their ſkill or induſtry, productions multiply beyond domeſtic wants; ſhe furniſhes the means of tranſporting them to other markets: and whenever by commerce they acquire wealth, ſhe points the way to employ their riches rationally, nobly, benevolently; in methods honorable and uſeful to themſelves

ſelves and their deſcendants; which add ſplendor to the ſtate, and yield benefit both to their cotemporaries and to poſterity: ſhe farther teaches them to defend their poſſeſſions; to ſecure their liberty and lives, from the attempts of lawleſs violence, or unreſtrained ambition.

An art ſo variouſly conducive to the happineſs of man, to the wealth, luſtre and ſafety of nations; naturally commands protection and encouragement: in effect, it appears, that in all civilized times, and well regulated governments, it has been much attended to, and promoted with unremitting aſſiduity; and the perfectioning of other arts, has ever been a certain conſequence: for where building is encouraged; painting, ſculpture, and all the inferior branches of decorative workmanſhip, muſt flouriſh of courſe; and theſe, have an influence on manufactures, even to the minuteſt mechanic productions; for deſign is of univerſal benefit, and ſtamps additional value on the moſt trifling performances, the importance of which, to a commercial people, is obvious; it requires no illuſtration.

Let it not however be imagined, that building, merely conſidered as heaping ſtone upon ſtone, can be of great conſequence; or reflect honor, either on nations or individuals: materials in architecture, are like words in phraſeology; having ſeparately but little power; and they may be ſo arranged, as to excite ridicule; diſguſt, or even contempt; yet when combined with ſkill, expreſſed with energy, they actuate the mind with unbounded ſway. An able writer can move even in ruſtic language, and the maſterly diſpoſitions of a ſkilful artiſt, will dignify the meaneſt materials; while the weak efforts of the ignorant, render the moſt coſtly enrichments deſpicable. To ſuch, the compliment of Apelles may juſtly be applied; who, on ſeeing the picture of a Venus magnificently attired, ſaid to the operator; Friend; though thou haſt not been able to make her fair, thou haſt certainly made her fine.

Hitherto architecture has been conſidered in a general light; under its different diviſions of naval, military, and civil. I purpoſe however in the preſent work, to confine myſelf to the laſt of theſe branches, as being of more general uſe, and that, to which my own ſtudy and practice have been more immediately directed.

It is not to be ſuppoſed, that ſo difficult an art as architecture, after having lain many centuries abſorbed in the general cloud of barbariſm, ſhould at once, emerge in full perfection; or that the firſt reſtorers of the ancient manner of building, could at once, bring it to a degree of purity, incapable of farther improvement. With very little aſſiſtance from books upon the ſubject, and that, often obſcure, unintelligible, or erroneous; while they were labouring to ſeparate beauty from deformity; endeavouring to reſtore to light, what length of time, caſualties, war and violence, had been active to deface; to anihilate; we muſt neither cenſure with ſeverity their omiſſions, nor wonder at their miſtakes; yet with all due reverence for the memory of thoſe illuſtrious artiſts, it may be remarked, that they left much undone; and taught many errors. Their meaſures and deſigns were, generally ſpeaking, incorrect; their plates ill engraved; and the want of method, and of preciſion in treating their ſubject, renders the ſtudy of it in their works, exceedingly diſcouraging.

It is indeed true, that later writers have, in a great meaſure, ſupplied their omiſſions, and rectified their faults: few ſubjects have been more amply treated of than architecture; nor any, by perſons better qualified; inſomuch, that little remains either to be diſcovered, or improved; every branch of the art having been maturely conſidered, and brought very near the utmoſt degree of certainty of which it is capable.

Yet one thing of great uſe remained to be done; at leaſt, in our language; which was, to collect in one volume, what lay diſperſed in many hundreds, much the greater part of them written in foreign languages: and to ſelect, from mountains of promiſcuous materials, a ſeries of ſound precepts, and perfect deſigns.

Whoever has applied to the ſtudy of architecture, will readily grant that there are few purſuits more perplexing: the vague foundation on which the more refined parts of the art are built, has given riſe to ſuch a multiplicity of jarring opinions, all ſupported by, at leaſt, plauſible arguments; that it is exceedingly difficult to diſcriminate, or diſtinguiſh what is real, from that which is merely ſpecious: the connexions which conſtitute truth or fallacy, being often far diſtant, beyond the ſight of ſuperficial obſervers. Whence, the merit of performances is too often meaſured by the fame of the performer; by the taſte of the age in which they were produced; by vulgar report; party opinion; or ſome other ſtandard equally inadequate: and not ſeldom by precepts delivered ſome centuries ago, calculated for other climates, other men, and other cuſtoms.

To obviate theſe inconveniencies, the author ventured, ſoon after his return from Italy, upwards of thirty years ago, to attempt ſuch a compilation as is above mentioned; by a publication of the firſt edition of the preſent work. He flattered himſelf, that if well conducted; it would greatly ſhorten the labours of the ſtudent, and lead him to truth, by eaſy and more inviting paths; that it might render the ſtudy of architecture, and its attendant arts, more frequent; ſerve to promote true taſte, and to diffuſe the love of *Vertu*, among perſons of high rank, and large fortune; the fit encouragers of elegance.

His deſign was, without biaſs from national, or other prejudices; candidly to conſider what had been produced upon the ſubject: and to collect from the works or writings of others, or from his own obſervations, in all parts of Europe, famed for taſte; ſuch particulars, as ſeemed moſt intereſting; or propereſt to give a juſt idea of ſo very uſeful, and truly noble an art.

Sensible that all ages had produced bad, or indifferent artiſts; and that all men, however excellent, muſt ſometimes have erred; it was his intention, neither to be influenced by particular times, nor by the general reputation of particular perſons: where reaſon or demonſtration could be uſed, he purpoſed to employ them; and where they could not, to ſubſtitute in their places, generally admitted opinions. Abſtruſe or fruitleſs arguments he wiſhed carefully to avoid; nor was it his intention to perplex the unſkilful, with a number of indiſcriminate examples: having judged it much more eligible to offer a few; calculated to ſerve at once as ſtandards for imitation, or guides to judge by, in ſimilar productions. Preciſion, perſpicuity

perſpicuity and brevity, were to be attempted in the ſtyle; and in the deſigns, ſimplicity, order, character, and beauty of form.

THE difficulty and extent of ſuch a taſk, undertaken early in life, rendered ſucceſs very uncertain; and filled the writer's mind with many apprehenſions: but the indulgent encouragement, ſo liberally extended to the two former publications of this work; and the frequent calls for a third: are pleaſing teſtimonies that his endeavours have not been wholly in vain. He ventures to conſider the ſale of two numerous editions, written upon a ſubject rather inſtructive than entertaining; and in a language generally unknown to foreign Artiſts; as a proof of the utility of his undertaking: at leaſt, in the country where he moſt wiſhed to have it uſeful. And ſtimulated by a deſire of rendering it ſtill more deſerving public notice; he has carefully reviſed, and conſiderably augmented this third edition: he does not preſume to ſay improved it; but flatters himſelf the experience gained by thirty years very extenſive practice, ſince the original publication; has enabled him to judge with ſome degree of certainty, at leaſt, of what might be left out, be added, or altered to advantage.

AMONGST the additions to this third edition, there is an introductory diſcourſe; deſigned to point out, and briefly to explain, the requiſite qualifications and duty of an architect, at this time: and in the courſe of the work, many additional hints, explanations, and elucidations, have been inſerted; wherever they ſeemed, either neceſſary for better underſtanding the text; for the farther information of the reader; or for giving additional force, and greater authority, to what had been before advanced. It has farthermore been attempted, on different occaſions, to point out to the ſtudent the courſe he ought to ſteer; the dangers he has to avoid; the object he muſt conſtantly keep in view.

TO theſe additional articles in the text, are added four entire new plates; one of chimney pieces, the reſt containing vaſes, urns, and other ornamental pieces, deſigned by the Author; and executed for their Majeſties, his Grace the Duke of Marlborough, the Earl of Charlemont, and ſome other perſons of high rank. Several of the old plates have alſo been altered; and it is hoped, ſomewhat improved.

THE favourable reception, this Treatiſe on the ornamental part of architecture has experienced, both in England, and abroad, is ſuch, as certainly required a full diſcharge, of the original engagement: by treating upon the Art, in its remaining branches. But ſuch, and ſo conſtant, have been the Writer's avocations; that in the courſe of thirty years, it has never been in his power, properly to ſet about, ſo extenſive an undertaking: and a variety of concurring circumſtances, render it leſs ſo now, than ever. Looſe materials have, indeed, been abundantly collected; and many deſigns have from time, to time, been made; with an eye to the general intention: but there are ſo many more to make; ſo much to correct and methodize; that he muſt, however reluctantly, relinquiſh the taſk: and conſign the remainder, to the execution of ſome future pen.

IN the mean time, from the method throughout obſerved, in treating the preſent ſubject; it is preſumed; that this part may now be, as it has hitherto been, conſidered as a diſtinct work: in all reſpects unconnected, with any thing that might, or

may follow: which form was originally fixed upon for the advantage of the ſubſcribers, as well as for the ſecurity of the publiſher; and has now been continued, partly from neceſſity; and in part, for the benefit of purchaſers: many of whom, have little or no occaſion to ſtudy any more of the art, than what the preſent publication contains: the remaining branches, though very important to builders; being of little ſervice to connoiſſeurs, or men of taſte; who aſpire to be judges of the beauties, or deformities of a ſtructure: without caring much about the reſt; or having the fatigue, of entering into particulars; either concerning its value, its diſpoſition, or conſtruction.

INTRODUCTION.

CIVIL ARCHITECTURE is that branch of the builder's art, which has for its objects all ſtructures, either ſacred or prophane, calculated to ſupply the wants and comforts; or to promote, extend, and diverſify, the pleaſures of life: either contrived to facilitate the buſineſs; give luſtre to the duties; or diſplay the ſtate and diſtinctions of ſociety. Its purpoſe is to erect edifices, in which ſtrength and duration, ſhall unite with beauty, convenience, and ſalubrity; to aſcertain their value; and to build them with every attention to ſafety, eaſe, and economy.

MANY, and ſingularly oppoſite, muſt be the qualities and attainments of him, who aſpires to excel, in an art ſo variouſly directed. "Architecture," ſays father Laugier, "is of all uſeful arts, that which requires the moſt diſtinguiſhed talents; "there is perhaps as much genius, good ſenſe, and taſte requiſite, to conſtitute a "great architect; as to form a painter or poet of the firſt claſs. It would be a "ſtrange error to ſuppoſe it merely mechanical; and confined to digging founda- "tions, or building walls, by rules of which the practice, ſuppoſes nothing more "than eyes accuſtomed to judge of a perpendicular, and hands expert in the ma- "nagement of a trowel. In contemplating the builder's art, all indeed that ſtrikes "a vulgar imagination, are, confuſed mounds of incommodious ruins; formleſs "heaps of collected materials; dangerous ſcaffoldings; a frightful clatter of ham- "mers, tools, and working machinery; an army of ſlovenly beſpattered labourers "and workmen: but theſe are only as it were, the rough bark of an art, the inge- "nious myſteries of which, though only diſcoverable to few obſervers, excite the "admiration of all who comprehend them. They perceive inventions of which the "boldneſs, implies a genius, at once fertile and comprehenſive; proportions of "which the juſtneſs, announces a ſevere and ſyſtematic preciſion; ornaments of "which the excellence, diſcovers exquiſite and delicate feelings: and whoever is "qualified to taſte ſo many real beauties, will, I am certain, far from attempting to "confound architecture with the inferior arts, be ſtrongly inclined to rank it amongſt "thoſe that are moſt exalted."

VITRUVIUS requires that the architect ſhould have both ingenuity and applica- tion, obſerving, that wit without labour, or labour without wit, never arrived at perfection. "He ſhould," ſays he, "be a writer and draughtſman, underſtand geo- "metry, optics, and arithmetic; be a good hiſtorian and philoſopher, well ſkilled "in muſic, and not ignorant in either phyſic, law, or aſtrology. The ſame author "farther requires that he ſhould be poſſeſſed of a great and enterprizing mind; be "equitable, truſty, and totally free from avarice; without which, it would be im- "poſſible to diſcharge the duties of his ſtation with due propriety: ever diſintereſted,

" he ſhould be leſs ſolicitous of acquiring riches, than honour, and fame, by his pro-
" feſſion."

And Pythius, another ancient writer, cited by Vitruvius, inſiſted, that an architect ſhould be more expert in every profeſſion, connected with his art; than the ableſt profeſſors of each art reſpectively.

To this however Vitruvius does not aſſent; obſerving, " that the human mind " cannot arrive at perfection, in ſo many difficult and various parts of knowledge. " It is," ſays he, " even rare in the courſe of a century to find a man ſuperlatively " excellent in any profeſſion; why then is it expected, that an architect ſhould " equal Apelles in painting, Miro and Polycletes in ſculpture, Hippocrates in me-" dicine, Ariſtoxenes in muſic, or Ariſtarchus in purity of language: Pythius ſhould " have remembered, that every art conſiſts of two parts; theory, and practice: the " latter of which, appertains peculiarly to its profeſſors; but the former; is com-" mon to them, and to the learned in general. If therefore an architect, be ſuffi-" ciently maſter in all the arts connected with his profeſſion, to judge perfectly of " the merit of their productions, it is the moſt that ſhould be inſiſted upon; and if " ſo qualified, he ſhall not need to bluſh at his own inſufficiency."

In fact, the buſineſs of an architect requires him rather to be a learned judge, than a ſkilful operator; and when he knows how to direct, and inſtruct others, with preciſion; to examine, judge, and value, their performances with maſterly accuracy; he may truly be ſaid to have acquired all that moſt men can acquire; there are but few inſtances of ſuch prodigies as Michael Angelo Bonarroti, who was at once the firſt architect, painter, geometrician, anatomiſt, and ſculptor, of his time.

Vitruvius farthermore obſerves, that an art enriched with ſuch variety of knowledge, is only to be learned by long and conſtant application; and adviſes his cotemporaries never to aſſume the title of architects, till they are perfect maſters of their own profeſſion, and of the arts and ſciences, with which it is connected: a caution, that even in the preſent times, may perhaps not be unneceſſary.

It will not readily occur, why a man ſhould be either hiſtorian, or philoſopher; muſician, or phyſician; lawyer, or aſtrologer; before he ventures to commence architect. Our author, however, aſſigns his reaſons; which, for the ſake of brevity, are here omitted. The curious reader will find them in the original book; to which he is referred, for farther information.

Some part of all this knowledge, though it might have been neceſſary to an artiſt of the Auguſtan age, is not abſolutely ſo now; ſome part of it too, ſeems rather oſtentatiouſly introduced; more to enumerate the learned writers own qualifications, than ſuch as were indiſpenſably neceſſary, to every man of his profeſſion: the remaining part ſhall be mentioned in its place; while I venture to give an opinion, concerning the requiſite qualifications of an architect: differing in ſome particulars, from thoſe above given; but more adapted, I flatter myſelf, to the wants, cuſtoms, and modes of life of our cotemporaries, as well as to the duties and avocations of a modern architect.

ARCHITECTURE, being an active, as well as ſpeculative art; in which exertions of the body, the organs of ſenſe, and of utterance, are equally neceſſary with efforts of the mind; it naturally follows, that ſuch as intend to make it their profeſſion, ſhould enter the liſts with a good ſtock of health, vigor and agility; they ſhould neither be lame, nor unwieldy; neither aukward, ſlow, nor helpleſs; neither purblind, nor deaf; nor have anything ridiculous about them, either natural or acquired. Their underſtanding ſhould be ſound; the ſight and apprehenſion quick; the reaſoning faculties clear, and unwarped by prejudices; the temper enterprizing, ſteady, reſolute; and though benevolent, rather ſpirited than paſſive, meek, or effeminate.

THE neceſſity of theſe qualities, in one deſtined to direct and manage great works, to govern and control numerous bands of clerks, inſpectors, artiſts, artificers, workmen and labourers; muſt be ſufficiently obvious. And as at the preſent time, few engage in any profeſſion, till qualified for the world by a proper ſchool education at leaſt; it muſt be ſuppoſed, that to a competent proficiency in the learned languages, the ſtudent adds a thorough knowledge of his own; ſo as to ſpeak and write it, correctly at leaſt, if not elegantly; that he is a good penman; verſed in accounts; a ready practitioner in arithmetic; and has received and profited by ſuch other inſtructions, as tend to fix the moral character; to inculcate integrity; to poliſh the minds, and improve the manners of youth.

PROFICIENCY in the French and Italian languages is alſo requiſite to him; not only that he may be enabled to travel with advantage, and converſe without difficulty, in countries where the chief part of his knowledge is to be collected; but alſo to underſtand the many, and almoſt only valuable books treating of his profeſſion: the greater part of which, have never been tranſlated. And as among ſeamen, there is a technical language, of which no admiral could be ignorant, without appearing ridiculous; ſo in architecture, and the profeſſions connected therewith, there are peculiar modes of expreſſion, and terms of art, of which an architect muſt by no means be ignorant; as that knowledge, impreſſes upon the minds of the workmen, a reſpectable idea of his abilities, conſequently, a deference for his opinions; and farthermore enables him to explain to them intelligibly, what he intends, or wiſhes to be performed.

TO theſe qualifications, mental and corporeal, muſt be united genius; or a ſtrong inclination and bias of mind towards the purſuit in queſtion: without which little ſucceſs can be expected. This quality, whether it be * the gift of God, or a † fortuitous propenſity; whether innate, or acquired; has, not unaptly, been compared to thoſe inſtincts implanted by nature in different animals; by which, they are enabled to comprehend, and to perform certain things, with much eaſe; while

* The Lord hath called Bezaleel, and hath filled him with the Spirit of God, in wiſdom, in underſtanding, and in knowledge, and in all manner of workmanſhip, and to deviſe curious works.
And he hath put it in his heart, that he may teach both he and Aholiab, them hath he filled with wiſdom of heart to work all manner of work. Exodus, Chap. xxxv. v. 30, 31, 32, 33, 34.

† In the window of his mother's apartment, lay Spencer's Fairy Queen; in which he very early took delight to read, till, by feeling the charms of Verſe, he became, as he relates, irrecoverably a Poet. Such are the accidents, which, ſometimes remembered, and perhaps ſometimes forgotten, produce that particular deſignation of mind, and propenſity for ſome certain ſcience or employment, which is commonly called genius. The true genius is a mind of large general powers, accidentally determined to ſome peculiar direction. Sir Joſhua Reynolds, the great painter of the preſent age, had the firſt fondneſs for his art excited by the peruſal of Richardſon's Treatiſe. Dr. Johnſon's life of Cowley.

others, not having the ſame natural diſpoſition, neither comprehend, nor can perform them: thus the man of genius; or he, whoſe mind is peculiarly adapted to the contemplation of his ſubject; comprehends with eaſe, diſtinguiſhes with perſpicuity, treaſures up with nice ſelection; whatever is ingenious, extraordinary, uſeful or elegant: his imagination ever active in a favourite purſuit, will abound in ideas, combinations and improvements, equally new, ſtriking and agreeable; while he who miſtakes his way, and applies to ſtudies for which nature, or early impreſſions, have not prepared him; labours ſluggiſhly; without reliſh, as without effect; like Siſyphus, ever toiling up a hill, the ſummit of which he is never to reach.

As many ſorts of knowledge, very oppoſite in their natures, come under the architect's conſideration; his genius muſt be of a complex ſort: endowed with the vivacity and powers of imagination, requiſite to produce ſublime or extraordinary compoſitions; and at the ſame time, with the induſtry, patience, and penetration, neceſſary to inveſtigate mathematical truths; diſcuſs difficult, ſometimes irkſome ſubjects; and enter into details of various ſorts, often as tireſome, as they are neceſſary: a genius equally capable of expanding to the nobleſt and moſt elevated conceptions, or of ſhrinking to the level of the meaneſt and minuteſt enquiries: as Doctor Johnſon expreſſes it; a mind, that at once comprehends the vaſt, and attends to the minute.

Diſpositions of this nature are ſeldom found, their conſtituent qualities are in ſome degree incompatible; and hence perhaps, chiefly ariſes, the rarity of compleat maſters in the profeſſion. The lively ſtudent naturally ſtrikes into the paths which afford moſt ſcope for his fancy; he exerciſes himſelf in the arts of compoſition, and in the different branches of deſign; improves his knowledge of painting, ſculpture, books, and ſtructures; form his taſte, and turns his whole attention towards the ſublimer parts of the art; neglecting all the while, the inferior knowledge; ſo uſeful, ſo abſolutely neceſſary in practice; and of which a perfect maſter, can never be ignorant. Ambitious to excel, he muſt not neglect attainments, without which he cannot operate, while they may be purchaſed at the expence of induſtry, and ſteady perſeverance.

A celebrated Italian Artiſt, whoſe taſte and luxuriance of fancy were unuſually great, and the effect of whoſe compoſitions, on paper, has ſeldom been equalled; knew little of conſtruction or calculation, yet leſs of the contrivance of habitable ſtructures, or the modes of carrying real works into execution; though ſtyling himſelf an architect. And when ſome penſioners of the French academy at Rome, in the Author's hearing, charged him with ignorance of plans, he compoſed a very complicated one, ſince publiſhed in his work; which ſufficiently proves, that the charge was not altogether groundleſs. Indeed, it is not unfrequent in ſome countries of the continent, to find ingenious compoſers and able draughtſmen, with no other reading than Vignola's rules, and without any ſkill whatever in the executive parts; or knowledge of the ſciences belonging thereto.

On the other hand, the ſtudent of a more ſaturnine caſt, unable, or fearful perhaps, of ſoaring ſo high; applies his powers to the operative and economical branches of the art, reſting ſatisfied in the parts of deſign and compoſition, to imitate or copy others; content, if by borrowing whatever falls in his way, he avoids any ſtriking

ſtriking abſurdities; and reaches that ſtate of mediocrity, which though it may eſcape cenſure, commands no praiſe.

In countries where mechanics aſſume the profeſſion, and arrogate the title of architects; men of this ſort abound: they are by foreigners ſtiled portfolio artiſts; and their productions, collected without judgement, from different ſtores; muſt ever be diſcordant: without determined ſtile; marked character; or forcible effect: always without novelty; and having ſeldom either grandeur or beauty to recommend them. They are paſticcios in building; generally more imperfect than thoſe of the ſtage.

But though genius be the baſis of excellence, it can alone, produce but little: the richeſt ſoil when neglected, affords no other crop than weeds; and from the happieſt diſpoſition without culture; without knowledge of rules to guide, or judgement to reſtrain; little more can be expected, than capricious conceits; or luxuriant extravagancies.

Of mathematical knowledge, geometry, trigonometry, and conick ſections, ſhould be underſtood; as teaching the conſtruction, properties, contents, and diviſions of the forms uſed in building. Likewiſe mechanicks and hydraulicks, which treat of the formation, and aſcertain the effects of all kinds of machinery, ſimple, or complex, uſed in building: likewiſe of the raiſing, conveyance, and application of water; as well for the common uſes of life, as to produce many extraordinary effects; very ornamental in gardening, and efficacious in manufactures.

These ſciences farthermore, treat of the gravitation of bodies; and in what manner, and by what laws, they move, and act upon each other, under different circumſtances; with many other particulars, of frequent and material uſe in an art, where vaſt weights are to be moved; and in which, ſtructures of whatever form, muſt be calculated to carry great and indeterminate burthens; to ſtand the ſhock of heavy laden carriages; and to reſiſt the utmoſt fury of the elements.

By opticks, particularly that part which is called perſpective, the artiſt is enabled to judge with preciſion, of the effects of his compoſitions, when carried into execution; and alſo to repreſent them more pleaſingly in deſign; as well for his own ſatisfaction, as to give his employers a more perfect idea of his intentions, than could be collected from geometrical drawings. And an acquaintance with the other branches, will be uſeful on many occaſions; in the diſtribution of light, to produce particular ſtriking effects; and in the diſpoſal of mirrors, to create deceptions; multiply objects; and raiſe ideas of far greater, than the real magnitude, or extent, of that which is exhibited to view.

As to a painter, or ſculptor, ſo to an architect; a thorough maſtery in deſign, is indiſpenſably neceſſary; it is the ſine qua non; and the *mai a baſtanza* of *Carlo Maratt*, is full as applicable in one art, as in the others; for if the architect's mind be not copiouſly ſtored with correct ideas of forms; and habituated by long practice, to vary and combine them, as the fancy operates: or if his hand has not the power of repreſenting with preciſion and force, what the imagination ſuggeſts; his com-

 poſitions

poſitions will ever be feeble, formal, and ungraceful: and he will ſtand unqualified to diſcharge the principal part of his duty; which is, to invent and diſpoſe all that enters into his deſign; and to guide the painter, ſculptor, and every other artiſt or artificer, by advice, and preciſe directions; as far, at leaſt, as relates to the outline and effect of their performances: that all may be the effort of one mind, maſter of its object; and all the parts be calculated, to produce a general uniformly ſupported whole: which never can be the caſe, where artiſts and artificers are left to themſelves; as each, naturally enough, conſiders the perfection of his own part; ſometimes without comprehending, and always without attention, to the whole compoſition. Even Bernini, though an able architect; could ſeldom refrain from ſacrificing architecture, to the graces of ſculpture and painting; the ill conſequences of which, is ſufficiently conſpicuous in ſeveral of his works; but particularly, in his piazza of St. Peter's; where the ſtatues placed upon the colonades, inſtead of ſtanding upright, as they ſhould do, in all ſuch ſituations; are ſo whimſically contorted, that at a little diſtance, they ſeem to be performing a dance, and very conſiderably injure the effect, of that magnificent approach, to the firſt building in the Chriſtian world.

To the knowledge, practice, and facility of hand, juſt mentioned; compoſers in architecture muſt unite a perfect acquaintance with all kinds of proportions; having relation either to the grandeur, beauty, ſtrength, or convenience of ſtructures: their variations, as occaſions require; and the different effects which ſituation, diſtance, light, or other circumſtances have upon them: which is a ſcience of very conſiderable difficulty; and only to be attained, by much experience, and cloſe obſervation.

He farthermore muſt be well verſed in the cuſtoms, ceremonies, and modes of life of all degrees of men, his cotemporaries; their occupations and amuſements; the number and employments of their domeſticks, equipages and appurtenances; in what manner the buſineſs allotted to each is performed, and what is requiſite or proper, to facilitate the ſervice; with many other particulars, which though ſeemingly trifling, muſt not be unknown to him, who is to provide for the wants, and gratify the expectations of all.

Neither muſt he be ignorant of ancient hiſtory, fable and mythology; nor of antiquities; as far as relates to the ſtructures, ſculpture, ornaments, and utenſils of the Egyptians, Greeks, Romans, and Etrurians; as the eſtabliſhed ſtile of decoration, collects its forms, combinations, ſymbols, and alluſions, from theſe abundant ſources; which time, and the concurring approbation of many ages, have rendered venerable.

The painter's canvas, and the ſculptor's block, are their ultimate objects; but the architect's attention muſt at once be directed, to the grandeur or beauty, ſtrength, duration, fit contrivance, and economical execution of his compoſitions: qualities, that ever claſh; and which it often is exceedingly difficult to reconcile. His different plans, elevations, and ſections, muſt all be conſidered at the ſame time; and like the parts of a piece of muſick, be contrived to harmonize, and ſet each other off to moſt advantage.

To

To the excellence of the deſigner's art, muſt yet be added, the humbler, though not leſs uſeful ſkill, of the mechanick and accountant; for however able the draughtſman, he ſhould not deem himſelf an architect, nor venture upon practiſing in that capacity; till maſter of the executive parts of this profeſſion.

These imply, an acquaintance with all the known, approved methods of building, every kind of ſtructure ſecurely, and for duration. How difficulties ariſing from ſituation, nature of ſoils, or other adventitious circumſtances, are to be ſurmounted; and preciſely, what precautions the occaſion may require; in order to avoid ſuperfluous expence, by avoiding to employ ſuperfluous remedies.

They farther imply, a power of conducting large works, with order and economy; of meaſuring correctly according to eſtabliſhed uſages; of regulating the accounts with accuracy; of employing with diſcernment; directing and governing with ſkill and temper; many men of different profeſſions; capacities, and diſpoſitions: all without violence, or clamour; yet with full effect.

To maſtery in theſe particulars, muſt be added, proficiency in all the arts, liberal or mechanick, having relation to the building or adorning ſtructures: a capacity of determining exactly, the goodneſs of the different materials uſed; with the degree of perfection, and conſequent value at all times, of every kind of work: from the ſtately, ſplendid productions of the pencil, and chiſſel; to the moſt trifling objects employed in a fabrick: together with all the circumſtances conſtituting their value; as upon theſe, its occaſional fluctuation muſt depend.

Considerable as this detail may ſeem, it is yet inſufficient. A builder, like a chemiſt, muſt analyze his ſubſtances; be ſo much maſter of the conſtituent parts of his compoſition; their neceſſary forms and dimenſions; that, as thoſe of the profeſſion term it, he may be able to take the whole building to pieces; and eſtimate from his deſigns, the total amount of the ſtructure, before a ſingle ſtone is prepared.

To ignorance, or inattention in this particular; of which, for ſerious reaſons, no architect ſhould ever be ignorant, or careleſs; muſt be aſcribed, the diſtreſsful, often the ruinous uncertainty, of common eſtimates: for ſome, who condeſcend to eſtimate their own productions, know perhaps, but imperfectly, how their deſigns are to be carried into execution; and conſequently omit in the valuation, much that muſt be done. And ſome, who being too great for ſuch minute inveſtigations, employ others to eſtimate; without deſcribing thoroughly the manner in which they intend to proceed; leave them ſo much in the dark, that even if capable, they can do little more than gueſs at the value; and are ſeldom or ever right in their conjectures.

Others there are, who being either unqualified, or too idle to calculate themſelves, and perhaps, too parſimonious to employ any other perſon; (for it is a work of time, and conſiderable expence), value by the ſquare; an operation, both eaſy and expeditious; but of all, the moſt fallacious; excepting in common buildings; of ſimilar forms and dimenſions, built and finiſhed in the ſame manner: where, the amount of what has been done, may be a guide to value by. But in

extraordinary works, theſe rapid eſtimators never hit the mark; and are generally ſo far wide of it, as to draw ſhame and reproaches on themſelves; regret, difficulties, ſometimes ruin; both on the employer, and the tradeſmen employed.

As one, in whoſe honour and judgement the employer confides; and to whom the employed look up for protection and juſtice; as mediator, and judge between them; on ſubjects generally important: the architect's ſkill, vigilance, and activity, ſhould equal the conſequence of his ſtation; and ſtudious to ſuſtain his character, attentive to juſtify the confidence repoſed in him, he muſt neither inadvertently, nor otherwiſe, bring on unexpected ruinous expences; neither countenance, nor ſuffer impoſition on the one hand; oppreſſive parſimony, or ill directed liberality on the other.

Let it not however, be inferred, from any thing here ſaid, that errors in eſtimation proceed on every occaſion, from the ignorance, or inadvertency of the architect: thoſe who build, are often whimſical themſelves; or adviſe with ſuch as are: they are pleaſed to-day, diſguſted to-morrow, with the ſame object: hence alterations commence; deviation, ſucceeds to deviation; their firſt ideas are extended, improved and varied, till by inſenſible gradations, both the form and value, of the original deſign are entirely changed.

All that in ſuch caſes the architect can do, and in diſcharge of his duty ſhould do; is, at the time, to notify by written information, the conſequences of the alterations taking place. I ſay written, for words are ſoon forgot; or if remembered, explained away; and ſometimes denied. But written teſtimony admits of no equivocation, it cannot be diſputed, and will fix the blame, where it ſhould be fixed; not on the architect's want of care or judgement; but on the builder's wavering diſpoſition.

Ornamental gardening, which in Italy, France, and other countries of the European continent, conſtitutes a part of the architect's profeſſion; is here in other hands: and, with a few exceptions, in very improper ones. Should that pleaſing art be ever practiſed by men, who have made compoſition in general, a ſtudy; who by having ſeen much, have ſtored the fancy with copious imagery; and by proficiency in the arts of deſign, formed a correct and elegant taſte; we might expect to find much more variety, and far higher perfection in works of that ſort, than can now be expected, or is yet to be boaſted of.

It ſeems almoſt ſuperfluous to obſerve, that an architect cannot aſpire to ſuperiority in his profeſſion, without having travelled; for it muſt be obvious, that an art founded upon reaſoning and much obſervation, is not to be learnt without it; books cannot avail; deſcriptions, even drawings or prints, are but weak ſubſtitutes of realities: and an artiſt who conſtantly inhabits the ſame place, converſes with the ſame people, and has the ſame objects always obtruding on his view; muſt neceſſarily have very confined notions; few ideas, and many prejudices. Travelling rouſes the imagination; the ſight of great, new, or uncommon objects, elevates the mind to ſublime conception; enriches the fancy with numerous ideas; ſets the reaſoning faculties in motion: he who has beheld with attentive conſideration, the venerable remains of ancient magnificence; or ſtudiouſly examined the ſplendor of modern times, in the productions of the ſublime Bonarotti, Bramante, Vignola, Palladio,

Palladio, Raphael, Polidore, Peruzzi, Sanſovino, San Michaeli, Amanato, Bernini, Pietro da Cortonna, and many other original maſters; whoſe works are the ornament and pride of the European continent; muſt have acquired notions, far more extenſive, and ſuperior to him, whoſe information has been gleaned, from the copiers, or feeble imitators, of theſe great men; and their ſtupendous works: he muſt be in compoſition more animated, varied and luxuriant; in deſign, more learned, correct, and graceful: ever governed by a taſte formed at the fountain's head, upon the pureſt models; and impreſſed with the effect of thoſe great objects, which ſome time or other in life, have been the admiration of moſt who either claim diſtinction, or aſpire to elegance; he muſt always labour with greater certainty of ſucceſs.

By travelling, a thorough knowledge of different countries, their language and manners, are alone to be attained in perfection: and by converſing with men of different nations, we learn their opinions; hear their reaſons in ſupport of them; and are naturally led to reaſon in our turn: to ſet aſide our national prejudices, reject our ill-founded maxims, and allow for granted, that only which is clearly proved; or is founded on reaſon, long experience, and careful obſervation.

Thus habituated to conſider with the rigour of critical accuracy, we learn to ſee objects in their true light; without attention, either to caſual approbation or diſlike: to diſtinguiſh truth through the veil of obſcurity, and detect pretence however ſpeciouſly ſuſtained. Travelling to an artiſt, is as the univerſity to a man of letters, the laſt ſtage of a regular education; which opens the mind to a more liberal and extenſive train of thinking, diffuſes an air of importance over the whole man, and ſtamps value upon his opinions: it affords him opportunities of forming connections with the great, the learned, or the rich; and the friendſhips he makes while abroad, are frequently the firſt cauſes of his reputation, and ſucceſs at home.

Of the Origin, *and* Progress *of* BUILDING.

Buildings were certainly among the firſt wants of mankind; and architecture muſt, undoubtedly be claſſed, among the earlieſt antediluvian arts. Scripture informs us, that Cain built a city: and ſoon after the deluge, we hear of many cities; and of an attempt to build a tower that ſhould reach the ſky: a miracle ſtopped the progreſs, and prevented the completion of that bold deſign.

The firſt men, living in a warm climate, wanted no habitations: every grove afforded ſhade from the rays of the ſun, and ſhelter from the dews of the night; rain fell but ſeldom, nor was it ever ſufficiently cold, to render cloſer dwellings than groves, either deſirable or neceſſary, even in the hours of repoſe: they fed upon the ſpontaneous productions of the ſoil, and lived without care, as without labour.

But when the human ſpecies increaſed, and the produce of the earth, however luxuriant, was inſufficient to ſupply the requiſite food; when frequent diſappointments drew on contention, with all its train of calamities, then ſeparation became neceſſary; and colonies diſperſed to different regions: where frequent rain, ſtorms and piercing cold, forced the inhabitants to ſeek for better ſhelter than trees.

At firſt they moſt likely retired to caverns, formed by nature in rocks; to hollow trunks of trees; or to holes, dug by themſelves in the earth; but ſoon diſguſted with the damp and darkneſs of theſe habitations, they began to ſearch after more wholeſome and comfortable dwellings.

The animal creation pointed out both materials, and manners of conſtruction; ſwallows, rooks, bees, ſtorks; were the firſt builders: man obſerved their inſtinctive operations, he admired; he imitated; and being endued with reaſoning faculties, and of a ſtructure ſuited to mechanical purpoſes, he ſoon outdid his maſters in the builder's art.

Rude and unſeemly, no doubt, were the firſt attempts; without experience or tools, the builder collected a few boughs of trees, ſpread them in a conick ſhape, and covering them with ruſhes, or leaves and clay; formed his hut: ſufficient to ſhelter its hardy inhabitants at night, or in ſeaſons of bad weather. But in the courſe of time, men naturally grew more expert; they invented tools to ſhorten and improve labour; fell upon neater, more durable modes of conſtruction; and forms, better adapted than the cone, to the purpoſes for which their huts were intended. They felt the want of convenient habitations, wherein to taſte the comforts of privacy, to reſt ſecurely, and be effectually ſcreened from troubleſome exceſſes of weathers. They wanted room to exerciſe the arts, to which neceſſity had given birth; to depoſit the grain, that agriculture enabled them to raiſe in abundance; to ſecure the flocks, which frequent diſappointments in the chace, had forced them to collect and domeſticate. Thus ſtimulated, their fancy and hands, went arduouſly to work, and the progreſs of improvement was rapid.

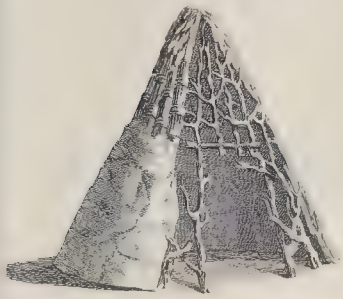
That the primitive hut was of a conick figure, it is reaſonable to conjecture; from its being the ſimpleſt of ſolid forms: and moſt eaſily conſtructed. And wherever wood was found, they probably built in the manner above deſcribed; but, ſoon as the inhabitants diſcovered the inconvenience of the inclined ſides, and the want of upright ſpace in the cone; they changed it for the cube: and, as it is ſuppoſed, proceeded in the following manner.

Having, ſays Vitruvius, marked out the ſpace to be occupied by the hut; they fixed in the ground, ſeveral upright trunks of trees, to form the ſides; filling the intervals between them with branches, cloſely interwoven, and ſpread over with clay. The ſides thus compleated, four beams were laid on the upright trunks; which being well faſtned together at the angles of their junction, kept the ſides firm; and likewiſe ſerved to ſupport the covering or roof of the building; compoſed of ſmaller trees, placed horizontally, like joiſts: upon which were laid ſeveral beds of reeds, leaves, and earth or clay.

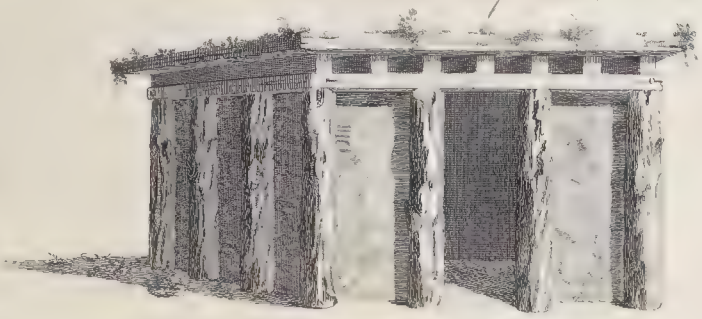
By degrees, other improvements took place; and means were found to make the fabrick laſting, neat, and handſome: as well as convenient. The bark and other protuberances were taken from the trees that formed the ſides, theſe trees were raiſed above the dirt and humidity on ſtones; were covered at the top with other ſtones; and firmly bound round at both ends with ozier or cords, to ſecure them from ſplitting. The ſpaces between the joiſts of the roof, were cloſed up with clay

The Primitive Buildings &c.

The First sort of Huts.

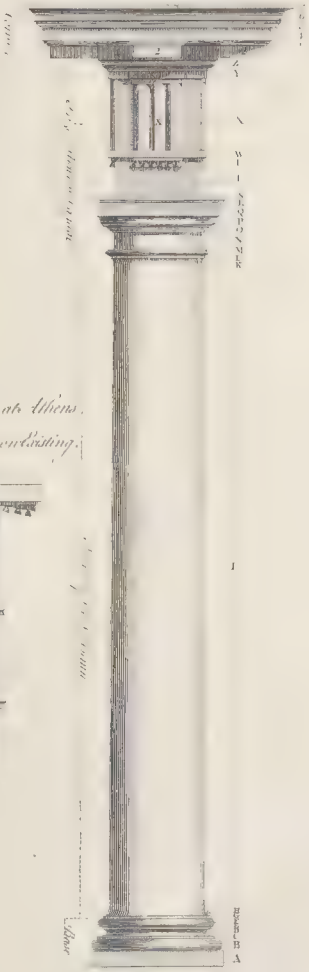


The Second sort of Huts.



The Third sort of Huts which gave birth to the Doric Order.

The Doric Order in its Improved State.



Origin of the Corinthian Capital

The Doric Profile of the Temple of Theseus at Athens, one of the most Antient Monuments of that Order now Existing.

A Plinth
B Lower Torus
C Fillet or Square
D Scotia
E Fillet
F Upper Torus
G Fillet or lower Cincture
H Conge
I Shaft of the Column
K Conge
L Fillet or upper Cincture
M Astragal
N Neck or Frize of y Capital
O Fillets or Annulets
P Ovolo or Echinus
Q Abacus
R Inverted Cyma or Ogee
S Fillet
T Fascia of y Architrave
V Dreps
W Fillet or Septa
X Triglyphs
Y Capital of the Triglyph
Z Ovolo or Quarter round
1 Mutule or Modillion Band
2 Rutules
3 Ogee
4 Corona or Drip
5 Ogee
6 Cavetto
7 Fillet

to dimenſion; and all their ideas of elegance or beauty, to richneſs of materials, or gaudineſs of colouring. We obſerve a barrenneſs of fancy in their compoſitions; a ſimplicity and ſameneſs in their forms; peculiar to primitive inventions: but, even in the early works of the Egyptians, beſide their prodigious dimenſions; there are evident marks of taſte and fancy; it is in them we trace the firſt ornamental forms in architecture, and to their builders we are moſt probably indebted for the invention of columns, baſes, capitals and entablatures. We likewiſe read of roofs, ſupported by figures of Coloſſal men and animals in the works of the Egyptians, ſeveral ages before the introduction of Perſians or Caryatides, in the ſtructures of Greece: and of temples, adorned with ſtately porticos; enriched with columns, and ſculpture; and built, before there were any temples in Greece.

HENCE it may be inferred that the Grecians were not the inventors of ornamental architecture, but had that art, as well as their religion and gods, from the Egyptians: or from the Phœnicians their nearer neighbours, whoſe ſkill in arts is ſaid to have been anterior to theirs. Though both were of Egyptian origin.

DIODORUS SICULUS obſerves, that the Egyptian prieſts proved, both by their ſacred records, and alſo by other undoubted teſtimonies; that not only the poets and philoſophers of Greece, travelled anciently into Egypt, to collect their knowledge; but alſo their architects and ſculptors, and that every thing in which the Grecians excelled, and for which they were famous; was originally carried from Egypt into Greece.

THE Phœnicians however were very early celebrated for their proficiency in the arts of deſign; and there is no doubt, but the Greeks availed themſelves of their inventions.

WE are told that Hiram made two capitals for the pillars Jachin, and Boaz, in Solomon's temple; which, far as can be collected, from the accounts given of them in ſeveral parts of ſcripture, very much reſembled the Corinthian capitals, both in form and proportions; though executed ſome centuries before Calimachus, is reported by Vitruvius, to have invented it at Corinth. The cherubims of Hiram too, or the Coloſſal figures of men and animals, in the ſtructures of the Egyptians, were prior inventions; and undoubtedly ſuggeſted to the Greeks, their ideas of Perſians and Caryatides.

AND though architecture is certainly indebted to the Grecians, for conſiderable improvements; yet, it may with confidence be averred, that they never brought the art to its utmoſt degree of excellence. The art of building, ſays Leon Baptiſta Alberti, "ſprung up, and ſpent its adoleſcent ſtate in Aſia; after a certain time, "it flowered in Greece; and finally acquired perfect maturity in Italy; among the "Romans." And whether we call to mind, the deſcriptions given by ancient writers of Nineveh, Babylon, Thebes, Memphis; the Egyptian pyramids, the ſepulchres of their kings, their temples and other publick monuments: or contemplate, among the Roman works; their palaces, amphitheatres, baths, villas, bridges, mauſoleums and numerous other, yet exiſting, teſtimonies of their ſplendor; it muſt candidly be confeſſed, that the Grecians have been far excelled by other

other nations, not only in the magnitude and grandeur of their ſtructures, but likewiſe in point of fancy, ingenuity, variety, and elegant ſelection.

How diſtant the Grecians were from perfection in proportions, in the art of profiling, and other parts of the detail; will ſoon be evident to any impartial examiner, who compares the publications of Le Roi, Stewart, Revett, and other ingenious Levantine travellers; with the antiquities of the Romans: either on the ſpot, or as they have been given in books; by Palladio, Serlio, Deſgodetz, Sandrart, Piraneſi, and other authors. The laſt of thoſe here mentioned, has publiſhed a parallel, between the faireſt monuments of Greece and Rome; which is recommended to the inſpection and peruſal, of thoſe who have not yet ſeen it.

Indeed, none of the few things now exiſting in Greece, though ſo pompouſly deſcribed, and neatly repreſented, in various publications of our time; ſeem to deſerve great notice; either for dimenſion, grandeur of ſtile, rich fancy, or elegant taſte of deſign; nor do they ſeem calculated to throw new light upon the art, or to contribute towards its advancement: not even thoſe erected by Pericles or Alexander; while the Grecian arts flouriſhed moſt; neither the famous lantern of Demoſthenes, nor the more famous * Parthenon; which, though not ſo conſiderable as the church of St. Martin, in St. Martin's Lane, excluſive of its elegant ſpire; had for its architects, Phidias, Callicrates, and Ictinus; was the boaſt of Athens; excited the envy and murmurs of all Greece. We find indeed, in Pliny, and other ancient writers, very pompous deſcriptions of temples, ſuch as, that of Apollo at Miletus; of Ceres and Proſerpine at Eleuſes; of the Olympian Jupiter at Athens; and above all, of Diana at Epheſus; one of the ſeven wonders of the world. But if the Grecian architecture was defective in the time of Alexander, it muſt have been more ſo ſome centuries earlier: and concerning temples built in † bogs, and founded upon wool, to reſiſt earthquakes; and of which, the ſtones were ſet with ſand bags; ſome doubts may be indulged: as well as of thoſe made of ‡ wax, yet reſiſting the ardor of a Grecian Sun; or thoſe of braſs, yet catching fire and melting down.

At firſt ſight, it may appear extraordinary, that a people ſo renowned in arms; ſo celebrated for poetry, rhetorick, and every ſort of polite learning; and who carried ſculpture farther than any of the ancient nations; ſhould be ſo deficient in architecture: yet upon farther conſideration, many reaſons will occur why it neceſſarily ſhould be ſo.—Greece, a country ſmall in itſelf, was divided into a number of little ſtates; none of them very powerful, populous, or rich: ſo that they could attempt, no very conſiderable works in architecture; having neither the ſpace, the hands, nor the treaſures that would have been neceſſary. "It muſt be "owned, ſays Monſieur D'Ablancourt, that Greece, even in the zenith of her "greatneſs, had more ambition than power: we find Athens flattering herſelf with "the conqueſt of the univerſe, yet unable to defend her own territories, againſt the "incurſions of her neighbours: and who can refrain from laughter at the Lacede-"monians; rivals in fame with the Athenians; yet, in deſpair, and reduced to ſue "for peace; by the loſs of four hundred men."—The lake of Mœris would have deluged all Peloponneſus, and ruined all Greece; Babylon would have covered

* Plutarch in Pericles. † Pliny, lib. 36, c. 14. ‡ Pauſanias Phocid. c. 6.

Attica, and more men had been employed to build that city, than there were inhabitants in all the Grecian ſtates. The Egyptian labyrinth, was a hundred times larger than that of Crete; and more materials have been employed in one of the Egyptian pyramids, than were uſed in all the publick ſtructures of Athens.

If, at the ſame time it be recollected, that Greece, while divided into many governments, was conſtantly harraſſed with domeſtick wars, and from its union, always in an unſettled ſituation. That, an uncommon ſimplicity of manners prevailed among the Grecian ſtates; and the ſtricteſt maxims of equality, were zealouſly adhered to in moſt of them; it will be eaſy to account for the ſmall progreſs made by the Greeks in architecture. Demoſthenes obſerves, that the houſes of Ariſtides, Miltiades, or any other of the great men of their time; were no finer than thoſe of their neighbours: ſuch was their moderation, and ſo ſteadily did they adhere to the ancient manners of their country. One of the laws of Lycurgus ordained, that the ceilings of houſes ſhould only be wrought by an ax; and their gates and doors be left rough from the ſaw; no other tools than theſe, being permitted: which law, was ſo ſcrupulouſly obſerved among the Lacedemonians; that when King Leotychidas, ſaw at Corinth a ceiling, of which the timbers were neatly wrought; it was ſo new a ſight to him, that he aſked his hoſt, if trees grew ſquare in that country. It ſeems indeed, as if theſe ſumptuary laws of Lycurgus, had made a general impreſſion; and inſpired the Greeks, rather with contempt than veneration, for ſplendid ſtructures: even in their beſt time, they accounted it an effeminate folly, to be oſtentatious in that reſpect. " All the ſtates of Greece, ſays Plutarch, " clamoured loudly againſt Pericles for decorating Athens like a vain fantaſtick " woman, and adorning it with ſtatues and temples, which * coſt a thouſand " talents."

What magnificence the Grecians diſplayed in their ſtructures, was confined to their publick buildings; which were chiefly temples: wherein there appears to have been nothing very ſurpriſing, either for dimenſions; ingenuity of contrivance; or excellence of workmanſhip. Greece, almoſt conſtantly the theatre of war; abounded not like Italy, in magnificent villas; where the richeſt productions of art were diſplayed. Their publick roads were not adorned with mauſoleums, to commemorate their heroes; nor the towns, with arches or bridges to celebrate their triumphs. The Grecian theatres were inconſiderable, compared with thoſe of the Romans; the numachiæ and amphitheatres, unknown amongſt them; as were alſo the thermini, in which the Romans affected ſo much ſplendor.

In latter times indeed the Greeks, particularly the Athenians; abated of their original ſeverity; the orator abovementioned obſerves, that in his time, there were ſome private houſes more magnificent than publick edifices: but this does not appear to have been very common, and conſequently could not be productive of much additional ſplendor; even Alcibiades, the moſt luxurious Greek of his time; for he was accuſed of wearing a purple cloak, and of ſleeping upon a bed with a canvas bottom; doth not ſeem to have been better lodged, than other Athenians; excepting, that his houſe was painted.

* The Parthenon is ſaid to have coſt a thouſand talents; not quite ſo much as was expended in onions and radiſhes at the building of a pyramid: ſee Diodorus Siculus.

SINCE therefore the Grecian ſtructures are neither the moſt conſiderable, moſt varied, nor moſt perfect; it follows that our knowledge ought not to be collected from them; but from ſome purer, more abundant ſource; which, in whatever relates to the ornamental part of the art, can be no other than the Roman antiquity yet remaining, in Italy; France, or elſewhere: veſtiges of buildings erected in the politeſt ages; by the wealthieſt, moſt ſplendid, and powerful people of the world. Who, after having removed to Rome, from Carthage, Sicily, Egypt and Greece; the rareſt productions of the arts of deſign; as alſo the ableſt artiſts of the times; were conſtantly employed, during many centuries, in the conſtruction of all kinds of edifices that either uſe, convenience, luxury, or ſplendor required. Pliny informs us, that the works of the Romans were much more conſiderable than thoſe of any other people; that in the courſe of thirty-five years, more than a hundred ſumptuous palaces had been erected in Rome, the moſt inconſiderable of which was fit for the reſidence of a king: and that in his own time, the time of Veſpaſian; there were a great number, much more ſplendid, than any of the hundred abovementioned. The palaces of Caligula and Nero, were in extent like towns; and enriched with every thing that the moſt exquiſite taſte, and the moſt unbounded liberality, could ſuggeſt.

THE Romans began early to cultivate architecture. Several conſiderable works were erected by their kings, and many more, during the magiſtracy of their conſuls. Julius Cæſar, was paſſionately fond of that art; and beſides the buildings erected by him in Rome; he embelliſhed with conſiderable ſtructures, ſays Suetonius, the principal cities of Italy, France, Spain, Aſia, and Greece. Auguſtus, boaſted on his death bed; that he had converted Rome into a city of marble: he not only built much himſelf, but excited his friends to follow the example; and Mecænas, his favorite and miniſter, was the patron of arts, as well as of letters.

CALIGULA and Nero, were to the utmoſt, ſplendid in their buildings. The latter, carried his paſſion for architecture, as it is ſaid, even to the extravagant exceſs of burning Rome, that he might have the pleaſure of rebuilding it with greater regularity, and magnificence; which he afterwards did.

DURING the reigns of Claudius, Veſpaſian, Titus, Domitian and Nerva, many very conſiderable publick works were erected; both at Rome, and in other parts of the Roman dominions; and Veſpaſian, not only re-edified the capitol with greater magnificence than before; but alſo all the other publick buildings of Rome; which had ſuffered by the outrages of the Vitellians. He obliged the proprietors of ruined houſes to rebuild them; and cauſed to be erected, ſeveral new edifices of great coſt and magnificence; ſuch as the temple of Peace; the largeſt covered building of antiquity: another, dedicated to Minerva; of the richeſt and moſt exquiſite workmanſhip, ever exhibited in Rome: the firſt artiſts then alive, having been employed to paint, carve, and incruſtate the ſame. He alſo built the largeſt amphitheatre in the world; capable of containing eighty thouſand ſpectators, and many other works of leſs note. His care and munificence extended themſelves in like manner, to all other parts of the Roman empire; in which he erected new cities and towns, repaired, adorned and fortified, ſuch as were old, or ruinous.

TITUS, his ſucceſſor, was ſo attentive to the beauty of his metropolis; that, when a dreadful fire had deſtroyed many of its temples, and publick buildings; he reſolved to re-edify them at his own charge, with all poſſible expedition: diſpoſing of the furniture and ornaments of his own palaces, to defray the expence. Death, prevented the completion of his intentions; but Domitian, finiſhed what he had left undone; and alſo adorned Rome with many new ſtructures; particularly with a palace, ſurpriſing for the magnificence of its colonades, the number of its rooms, the ſplendor of its baths and female apartments. His love for building was ſuch; that he wiſhed to be another Midas, to the end that he might indulge his paſſion without control.

TRAJAN, in whoſe reign the Roman empire was in its moſt flouriſhing ſtate, cultivated all the arts of deſign; and with the aſſiſtance of the celebrated Apollodorus, his principal architect; executed many very conſiderable works. He erected a bridge of ſtone over the Danube, ſixty feet wide, one hundred and fifty feet high, and almoſt two miles in length. He alſo built ſeveral cities among the Dacians; embelliſhed Rome and other parts of Italy, with many publick edifices; rebuilt Antioch, which had been almoſt totally deſtroyed by an earthquake; and alſo repaired many other towns in Syria, that ſuffered at the ſame time, by the ſame calamity.

ADRIAN, whoſe ſkill in different branches of polite knowledge is well known; particularly in the arts of deſign; embelliſhed various parts of the Roman empire with ſplendid and beautiful ſtructures; ſuch as his bridge and mauſoleum at Rome; his villa near Tivoli; his wall in Britain; which extended from the river Eden in Cumberland, to the Tyne in Northumberland: many temples and other publick buildings in Gaul, in Greece, and in Africa: where he re-edified a conſiderable part of Carthage. He alſo rebuilt Jeruſalem; which Titus had demoliſhed about ſixty years before; and erected in Egypt, a ſtately pillar to the memory of Pompey.

ANTONINUS PIUS re-edified a great part of Rome, Narbonne, Antioch, and Carthage: all which cities, had ſuffered conſiderably by fire. And it was his cuſtom, whenever any damage happened to a city by an earthquake, a fire, an inundation, or other calamitous accidents; to repair it with money taken out of the publick treaſury. He greatly improved the ports of Tarracina and Cayeta; built conſiderable baths at Oſtia; aqueducts at Antium; temples at Lavinium: and all muſt be ſenſible, how powerfully the example of princes, operates upon the minds of their ſubjects; inſpires the ſame paſſions, and excites to the ſame purſuits.

IN ſhort, architecture continued to flouriſh among the Romans, though with abated luſtre; till Conſtantine removed the ſeat of empire to Byzantium: and the number of ſtately ſtructures, with which Rome, and the Roman dominions abounded; is almoſt incredible. Their very remains, excite at this day, the aſtoniſhment and admiration, of every judicious beholder: in ſpight of all that length of time, wars, party rage, barbariſm, caſual events, ſuperſtition and avarice; have done to deſtroy them.

IN theſe remains, there will be found abundant materials to work upon, and form a compleat ſyſtem of decorative architecture. The labours of the celebrated maſters

maſters of the fifteenth, ſixteenth, and ſeventeenth centuries, may, perhaps, be added to enrich the ſtock; and we may avail ourſelves of their labours, to facilitate, or ſhorten our own; but, it ſhould always be remembered, that though the ſtream may ſwell in its courſe, by the intervention of other ſupplies; yet it is pureſt at the fountain's head. And whoever aims at being ſuperiorly eminent in any profeſſion, muſt not receive his information at ſecond hand, from others; but mount himſelf to the origin and reaſon of things. The man, ſays Michael Angelo, who follows another, always is behind; but he who boldly ſtrikes into a different path, may climb as high as his competitor: and though the road be ſomewhat more rugged, yet, if his efforts are crowned with ſucceſs, the reward will amply compenſate, for the riſque and labour of the enterprize.

An anonymous Italian writer obſerves, that the ſuperiority of Raphael, may perhaps be owing, to his having been ſo univerſally admired and copied; that the modern ſculptors never equalled the ancient, becauſe they have done nothing but imitate them; and if, ſays he, all the ancient paintings hitherto diſcovered, are inferior to the modern; it is, perhaps owing, to our painters not having had the works of an Apelles to copy.

Nature is the ſupreme and true model of the imitative arts, upon which every great artiſt muſt form his idea of the profeſſion, in which he means to excel; and the antique is to the architect, what nature is to the painter or ſculptor; the ſource from which his chief knowledge muſt be collected; the model upon which his taſte muſt be formed.

But as in nature few things are faultleſs, ſo neither muſt it be imagined that every ancient production in architecture, even among the Romans, was perfect; or a fit model for imitation: as blind adorers of antiquity are ſometimes diſpoſed to believe. On the contrary, their remains are ſo extremely unequal, that it requires the greateſt circumſpection, and effort of judgement, to make a proper choice. The Roman arts, like thoſe of other nations; had their riſe, their æra of perfection, their decline. At Rome, as in London or Paris, there were few great architects, but many very indifferent ones; and the Romans had their connoiſſeurs, as we have ours; who ſometimes would dictate to the artiſt, and cramp the fortunate ſallies of his genius; force upon him and the world, their own whimſical productions; promote ignorant flatterers; diſcourage, even oppreſs, honeſt merit.

Vitruvius, ſuppoſed to have lived in the Auguſtan age, complains loudly of this hardſhip; and there is a remarkable inſtance of the vindictive ſpirit of an ancient connoiſſeur, in Adrian; who put to death the celebrated Apollodorus, for having ventured a ſhrewd remark upon a temple, deſigned by that emperor, and built under his direction.

In the conſtructive part of architecture, the ancients do not ſeem to have been great proficients. I am inclined to believe, that many of the deformities obſervable in the Grecian buildings, muſt be aſcribed to their deficiency in that particular: ſuch as their gouty columns; their narrow intercolumniations; their diſproportionate architraves; their hypetral temples, which they knew not how to cover; and their

temples with a range of columns running in the center, to ſupport the roof; contrary to every rule, either of beauty or convenience.

NEITHER were the Romans much more ſkilful: the precepts of Vitruvius and Pliny on that ſubject are imperfect, ſometimes erroneous; and the ſtrength or duration of their ſtructures, is more owing to the quantity and goodneſs of their materials, than to any great art in putting them together. It is not therefore from any of the ancient works, that much information can be obtained in that branch of the art.

TO thoſe uſually called Gothick architects, we are indebted for the firſt conſiderable improvements in conſtruction; there is a lightneſs in their works, an art and boldneſs of execution; to which the ancients never arrived: and which the moderns comprehend and imitate with difficulty. England contains many magnificent examples of this ſpecies of architecture, equally admirable for the art with which they are built, the taſte and ingenuity with which they are compoſed.

ONE cannot refrain from wiſhing, that the Gothick ſtructures were more conſidered; better underſtood; and in higher eſtimation; than they hitherto ſeem to have been. Would our dilettanti inſtead of importing the gleanings of Greece; or our antiquaries, inſtead of publiſhing looſe incoherent prints; encourage perſons duly qualified, to undertake a correct elegant publication of our own cathedrals, and other buildings called Gothick, before they totally fall to ruin; it would be of real ſervice to the arts of deſign; preſerve the remembrance of an extraordinary ſtile of building now ſinking faſt into oblivion; and at the ſame time publiſh to the world the riches of Britain, in the ſplendor of her ancient ſtructures.

MICHAEL ANGELO, who ſkilled as he was in mathematical knowledge, could have no very high opinion of the ancient conſtruction; boaſted that he would ſuſpend the largeſt temple of antiquity (meaning the Pantheon) in the air: which he afterwards performed, in the cupola of St. Peter's at Rome. And Sir Chriſtopher Wren, has conducted all parts of St. Paul's, and many others, his numerous admirable works, with ſo much art; that they are, and ever will be, ſtudied and admired by all intelligent obſervers. To him, and to ſeveral ingenious artiſts and artificers ſince his time, we owe many great improvements in carpentry; which the Engliſh have eſtabliſhed upon better principles, and carried to higher perfection, than any other nation.

SOME of the French architects have likewiſe been very ſkilful in conſtruction. The maſon's art in particular, has been conſiderably improved by that nation. And we are indebted to the French, to the Italians, and to a few of our own countrymen, for many valuable books; * in which the manner of conducting great works is taught; the neceſſary machines, tools, carriages, and other apparatus deſcribed; together with the properties, modes of preparing, and of employing, all kinds of materials

* Architettura di Andrea Palladio. Architettura Univerſale di Vincenzo Scamozzi. Archi. di Sebaſtiano Serliæ. Leo. Bap. Albertis de re Edificatoria. Architecture de Philibert de Lorme. Secret d'Architecture and l'Art de Charpente d'Matheinen Jouſſe. Felibien principes de l'Architecture, &c. La Pratique du trait par Deſargues. Belidore Science de Ingenieurs and Architecture Hydraulique. Gautier traite des Ponts et des Chemins. Blondel Cours d'Architecture. Architecture des Voutes par Derand. De la Rue traite de la Coupe des Pierres. Evelin's Silva. Wotton's Remains. Zabaglia Opere. Price's Britiſh Carpenter. Savot Archi. Françoiſe. Neve's Builders Dictionary. Frezier Coupe des Pierres (with the tranſlations in Engliſh, French, or Italian, of thoſe that are tranſlated.) And many others of leſs note.

uſed

uſed in building. They likewiſe have treated of the nature of ſoils, and the manner of laying foundations, of raiſing ſuperſtructures, and of every other particular, having relation to the mechanick arts, connected with building.

* THESE books, the ſtructures abovementioned, and many others to be found in England or elſewhere, are the ſchools from which the architect muſt collect the rudiments of conſtruction; but practice, experience, and attentive obſervation; are requiſite to render him conſummately ſkilled in this important part of his profeſſion.

THE architect's aim being, as has been obſerved, to erect handſome, ſtrong, convenient, ſalubrious and comfortable edifices; to aſcertain their value; and to build them with ſafety, eaſe, and frugality: the principles of his art may be ranged under four diſtinct heads, which are diſtribution; conſtruction; decoration; and economy.

OF conſtruction and decoration, it has been ſhown whence his knowledge ſhould be collected; and of diſtribution, which comprehends all particulars relative to health, convenience, comfort, pleaſure and profit; the artiſt may collect his general idea, from books or obſervations, made upon buildings erected for various purpoſes, in different climates and ages; but it is only by practice that he can become expert, in diſcovering the advantages, or defects of ſituation; the nature of climates, or expoſitions; the qualities of air, water, ſoil, and many other things neceſſary to be known: and it is only by a thorough acquaintance with the cuſtoms, and modes of living of his own times; and with the diſpoſitions, amuſements, occupations, and duties, of his cotemporaries; that he can effectually learn, how to ſupply their wants, or gratify their wiſhes.

IN countries where general cuſtom governs moſt things, and where all perſons of the ſame rank think, act and live, nearly after the ſame manner; the diſtributive part of architecture has not ſo many difficulties: but wherever that is not the caſe, every new employer opens a freſh field for inveſtigation; and the artiſt's taſk is never at an end.

THE economy of architecture is of ſo complicated, ſo extenſive a nature, that it is almoſt impoſſible for any man to know it perfectly; much more for an architect, whoſe mind muſt be loaded with a great variety of other knowledge. When therefore an artiſt has fixed his abode in any particular country, or great city; it will be beſt, to limit his reſearches at firſt, to that place alone: informing himſelf of the different quarries, woods, kilns, ſea ports or other markets from whence it is ſupplied with materials for building; as alſo of the different natures and degrees of goodneſs of theſe materials, the propereſt times for providing them, the beſt means of tranſporting them to the places of their deſtination; their value; and upon what circumſtances that value depends: to the end that he may be enabled at all times, to account for the fluctuation of price, and to aſcertain what they are juſtly worth.

* See note, page 24.

THE principal difficulty of this enquiry ariſes; not only from the many cauſes upon which the value of things and their riſe or fall depends, but from the caution with which dealers and tradeſmen of almoſt all denominations, conceal the ſecrets of their trade; and the real profits they have thereon.

HIS next ſtep muſt be to find out, all the able artiſts and artificers of the place, and its environs; to form an acquaintance with them, and examine carefully, in what branches they particularly excel; how far their ſkill extends; what their diſpoſitions, circumſtances, and tempers are; with their characters and connections: that by combining theſe particulars, he may employ their abilities upon every occaſion, to moſt advantage, as well for them, as for himſelf.

HE muſt then make diligent enquiry into the uſual prices allowed for every ſort of labour, or workmanſhip; according to its degree of perfection: how much time and what materials are requiſite to produce given quantities thereof; what profits according to the uſage of the place, are allowed thereon to the maſter workmen; and in what manner it is meaſured, or accounted for when done: that he may be entire maſter of his ſubject, and enabled to judge equitably between the employer and employed, as his ſtation requires. Theſe enquiries will at the firſt be attended with conſiderable difficulty, for the reaſons beforementioned; but like propoſitions in geometry, one information will facilitate another, and in the courſe of a few years practice, the artiſt, if he be induſtrious, and ſkilfully inquiſitive; will have acquired a thorough acquaintance with whatever concerns his own circle: and then he may extend his enquiries to other parts. What is already known, will ſerve as a clew to farther knowledge; and by degrees, he may become a very competent judge of every economical particular, in all the provinces of an extenſive kingdom.

IF in this chapter, or in other parts of the work (for it may be as well to apologize at once, for all) the author has ventured to think for himſelf, and ſometimes to ſtart opinions, differing from thoſe of other men; he begs leave to ſay, that it proceeds not from the affectation of being either ſingular, or dogmatical; but from conviction, that his notions are always founded in reaſon, or proved by well atteſted facts: and delivered with a wiſh to guide the reader right. All that has been ſaid, reſpecting the ſuperiority of the Roman architecture, was written a conſiderable time ago, when the Grecian had been extolled into repute; and ſtructures were erecting in different parts of England, after Attick deſigns. Fortunately, the ſight of theſe firſt ſpecimens, excited no deſires for more: after a few ineffectual ſtruggles, the Roman manner obtained a compleat victory. There ſeemed, at that time, no farther neceſſity to fight its cauſe; and theſe obſervations, intended for the ſecond edition of this work; were then ſuppreſſed. But latterly, the *Guſto Greco*, has again ventured to peep forth, and once more, threaten an invaſion. What therefore was omitted in the ſecond edition, it has been judged neceſſary to inſert in this, as a caution to ſtragglers.

Of

Regular Mouldings with their proper Ornaments.

Ornaments for the Astragal

Astragal or Bead

Ornaments for the Torus

Torus or Tore

Ornament for flat members

Scotia Mouth or Casement

Ornaments for the Ovolo

Echinus Ovolo or Quarter round

Ornaments for Ogees of different Sizes

Inverted Cyma Talon or O

Fig. 4

Ornaments for the Cyma

Cyma Cyma Recta or Cymatium

Ornaments of the Cavetto

Cavetto or Hollow

Ornaments for flat members

Ornaments for the Ogee

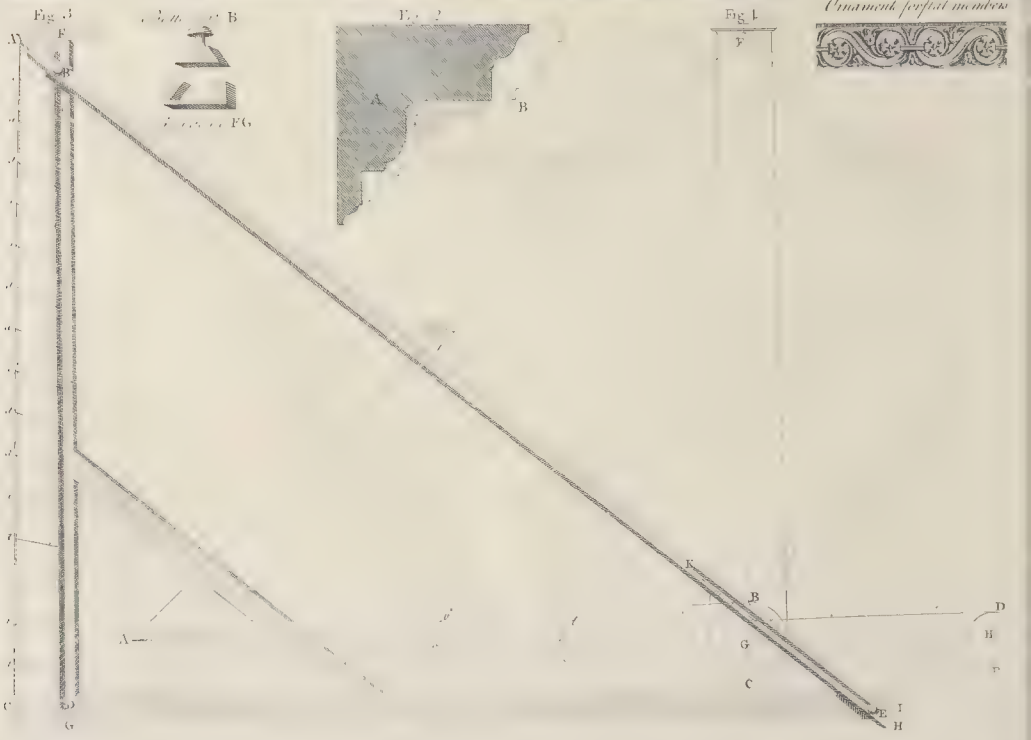
for the Cyma

Ornament for flat members

Fig. 3

Fig. 2

Fig. 1



Of the PARTS *which compoſe the* ORDERS *of* ARCHITECTURE, *and of their Properties, Application, and Enrichments.*

AS in many other arts, ſo in architecture, there are certain elementary forms; which, though ſimple in their nature, and few in number, are the principal conſtituent objects of every compoſition; however complicated or extenſive it may be.

OF theſe there are in our art, two diſtinct ſorts; the firſt conſiſting of ſuch parts, as repreſent thoſe that were eſſentially neceſſary, in the conſtruction of the primitive huts: as the ſhaft of the column, with the plinth of its baſe, and the abacus of its capital; repreſenting the upright trees, with the ſtones uſed to raiſe, and to cover them. Likewiſe the architrave and triglyph, repreſenting the beams and joiſts; the mutules, modillions, and dentils; either repreſenting the rafters, or ſome other pieces of timber, employed to ſupport the covering: and the corona, repreſenting the beds of materials, which compoſed the covering itſelf. All theſe are properly diſtinguiſhed by the appellation of eſſential parts; and form the firſt claſs. The ſubſervient members, contrived for the uſe and ornament of theſe; and intended either to ſupport, to ſhelter, or to unite them gracefully together, which are uſually called mouldings; conſtitute the ſecond claſs.

THE eſſential parts were, moſt probably, the only ones employed, even in the firſt ſtone buildings; as may be collected from ſome ancient ſtructures, yet remaining: for the architects of thoſe early times, had certainly very imperfect ideas of beauty in the productions of art, and therefore contented themſelves, with barely imitating the rude model before them; but coming in time to compare the works of their own hands, with animal and vegetable productions; each ſpecies of which, is compoſed of a great diverſity of forms, affording an inexhauſtible fund of amuſement to the mind; they could not but conceive a diſguſt, at the frequent repetition of ſquare figures in their buildings; and therefore thought of introducing certain intermediate parts; which might ſeem to be of ſome uſe, and at the ſame time be ſo formed, as to give a more varied, pleaſing appearance, to the whole compoſition: and this, in all probability, was the origin of mouldings.

OF regular mouldings, there are * eight; which are, the [a] Ovolo, the [b] Talon, the [c] Cyma, the [d] Cavetto, the [e] Torus, the [f] Aſtragal, the [g] Scotia, and the [h] Fillet.

THE names of theſe are alluſive to their forms; and their forms are adapted to the uſes, which they are intended to ſerve. The Ovolo and Talon, being ſtrong at their extremities, are fit for ſupports. The Cyma and Cavetto, though improper for that purpoſe, as they are weak in the extreme parts, and terminate in a point;

* See plate of regular mouldings.

[a] Ovolo, or Echinus, or quarter round. [b] Talon or Ogee, or reverſed Cyma. [c] Cyma, cyma recta, Cymatium. [d] Cavetto, or mouth, or hollow. [e] Torus or Tore. [f] Aſtragal, Bead, or Baguette. [g] Scotia, or Trochilos. [h] Fillet, Liſtel, Annulet.

are well contrived for coverings; to ſhelter other members: the tendency of their outline being very oppoſite, to the direction of falling water; which for that reaſon, cannot glide along their ſurface, but muſt neceſſarily drop. The Torus and Aſtragal, ſhaped like ropes, are intended to bind and ſtrengthen the parts on which they are employed; and the uſe of the Fillet and Scotia, is only to ſeparate, contraſt, and ſtrengthen the effect of other mouldings, to give a graceful turn to the profile, and to prevent that confuſion, which would be occaſioned by joining ſeveral convex members together.

THAT the inventors of theſe forms, meant to expreſs ſomething by their different figures, will ſcarcely be denied; and that the abovementioned were their deſtinations, may be deduced, not only from their figures, but from the practice of the ancients in their moſt eſteemed works: for if we examine the Pantheon, the three columns in the Campo Vaccino, the temple of Jupiter Tonans, the fragments of the frontiſpiece of Nero, the baſilica of Antoninus, the forum of Nerva, the arches of Titus and Septimus Severus, the theatre of Marcellus; and indeed, almoſt every ancient building, either at Rome, or in other parts of Italy and France, it will be found, that in all their profiles, the Cyma and the Cavetto are conſtantly uſed as finiſhings, and never applied where ſtrength is required: that the Ovolo and Talon, are always employed as ſupporters to the eſſential members of the compoſition; ſuch as the modillions, dentils, and corona: that the chief uſe of the Torus and Aſtragal, is to fortify the tops and bottoms of columns, and ſometimes of pedeſtals, where they are frequently cut in the form of ropes: as on the Trajan column, in the temple of Concord, and on ſeveral fragments which I have ſeen both at Rome, and at Niſmes in Languedoc: and that the Scotia, is employed only to ſeparate the members of baſes, for which purpoſe the Fillet is likewiſe uſed, not only in baſes, but in all kinds of profiles.

HENCE it may be inferred, that there is ſomething poſitive and natural, in theſe primary forms of architecture; and conſequently in the parts which they compoſe: and that Palladio erred, in employing the Cavetto under the Corona, in three of his orders; and in making ſuch frequent uſe through all his profiles, of the Cyma, as a ſupporting member. Nor has Vignola been more judicious, in finiſhing his Tuſcan cornice with an Ovolo; a moulding, extremely improper for that purpoſe, and productive of a very diſagreeable effect: for it gives a mutilated air to the whole profile; ſo much the more ſtriking, as it reſembles exactly that half of the Ionic cornice, which is under the Corona. Other architects have been guilty of the like improprieties, and are therefore equally reprehenſible.

THERE are various manners of deſcribing the Contour or out-line, of mouldings; the ſimpleſt however, and the beſt, is to form them of * quadrants of circles, as in the annexed deſigns: by which means, the different depreſſions and ſwellings, will be more ſtrongly marked; the tranſitions be made, without any angle; and the projections be agreeable to the doctrine of Vitruvius, and the practice of the ancients: thoſe of the Ovolo, Talon, Cyma, and Cavetto, being equal to their height; that of the Scotia to one third, and thoſe of the curved parts of the Torus and Aſtragal, to one half thereof.

* Pl. mouldings.

ON particular occaſions, however, it may be neceſſary ſometimes to increaſe, and at other times to diminiſh theſe projections; according to the ſituation, or other circumſtances attending the profile: as will hereafter appear. And whenever it ſo happens; the Qvolo, Talon, Cyma, and Cavetto; may either be deſcribed from the ſummits of equilateral triangles, or be compoſed of quadrants of the Ellypſis; of which the latter, ſhould be preferred; as it produces a ſtronger oppoſition of light and ſhade, and by that means, marks the forms more diſtinctly. The Scotia may likewiſe be framed of ellyptical portions, or quadrants of the circle; differing more or leſs from each other, than in the annexed † deſigns; by which means, its projection may either be increaſed or diminiſhed; but the curved part of the Torus and Aſtragal, muſt always be ſemicircular, and the increaſe in their projection, be made by ſtraight lines.

IN ſome antiques, and likewiſe in various modern buildings, where the parts are far removed from the eye, or where, from the extraordinary ſize of the ſtructure, it has not been practicable to give to every member its due projection, recourſe has been had to artifice, in order to produce the deſired effect. At St. Peter's of the Vatican, this practice is very frequent; and I have given a ſection of the Cornice *, terminating the pendentives of the dome, which may ſerve as a guide, in caſes where the like is neceſſary.

IT will however be proper to obſerve, that a frequent uſe of this expedient is to be avoided; as the artifice never ſucceeds, but where, by reaſon of the great diſtance, it is undiſcoverable: for the inciſions and contortions made in the mouldings, entirely deſtroy the natural beauty of their form.

CERTAIN of the modern Italians, and likewiſe ſome of our own learned Virtuoſi, who eagerly graſp at every Innovation; having obſerved theſe forms in the works of Michael Angelo, and in ſome of the temples of antiquity, without ſufficiently conſidering why they were there introduced; have very injudiciouſly made uſe of them, in all their own works; by which practice, their compoſitions, though having in other reſpects, a certain degree of merit; are, in this particular, highly cenſurable.

AN aſſemblage of eſſential parts and mouldings, is termed a profile: and on the choice, diſpoſition, and proportions of theſe, depend the beauty or deformity of the compoſition. The moſt perfect profiles, are ſuch as conſiſt of few mouldings; varied, both in form and ſize; fitly applied, with regard to their uſes; and ſo diſtributed, that the ſtraight and curved ones, ſucceed each other alternately. In every profile, there ſhould be a predominant member; to which all the others ought to ſeem ſubſervient: and made, either to ſupport, to fortify, or to ſhelter it, from injuries of weather: and whenever the profile is conſiderable; or much complicated; the predominant, ſhould always be accompanied with one or more other principal members; in form and dimenſion, calculated to attract the eye; create momentary pauſes; and aſſiſt the perception of the beholder. Theſe predominant and principal members, ought always to be of the eſſential claſs, and generally rectangular. Thus

† Pl. of Mouldings.

* Pl. Mouldings, fig. 1.

in a Cornice, the Corona predominates; the Modillions and Dentils are principals in the compoſitions; the Cyma and Cavetto, cover them; the Ovolo and Talon, ſupport them.

WHEN Ornaments are employed to decorate a profile, ſome of the mouldings ſhould always be left plain; in order to form a proper repoſe: for when all are enriched, the figure of the profile is loſt in confuſion. In an Entablature, the corona ſhould not be ornamented; nor the modillion band; nor the different faſcias of the architrave: neither ſhould the plinths of columns, fillets, nor ſcarcely any ſquare members be carved. For generally ſpeaking, they are either principal in the compoſition, or uſed as boundaries to other parts; in both which caſes, their figures ſhould be ſimple, diſtinct and unembarraſſed. The Dentil Band ſhould remain uncut, where the Ovolo and Talon immediately above and below it are enriched; as in the Pantheon at Rome, and at St. Paul's in London. For when the Dentils are marked; particularly if they be ſmall, according to Palladio's Corinthian deſign; the three members are confounded together, and being covered with ornaments, become far too rich, for the remainder of the compoſition: which are defects, at all times, ſtudiouſly to be avoided: as a diſtinct outline, and an equal diſtribution of enrichments; muſt on every occaſion, ſtrictly be attended to.

SCAMOZZI obſerves, that ornaments ſhould neither be too frugally employed, nor diſtributed with too much profuſion; their value will increaſe, in proportion to the judgment and diſcretion ſhewn in their application. For, in effect, ſays he, the ornaments of ſculpture uſed in architecture, are like diamonds in a female dreſs; with which it would be abſurd to cover the face, or other principal parts, either in themſelves beautiful, or appearing with greater propriety, in their natural ſtate.

VARIETY in ornaments, muſt not be carried to an exceſs. In architecture they are only acceſſories; and therefore they ſhould not be too ſtriking, nor capable of long detaining the attention from the main object. Thoſe of the mouldings in particular, ſhould be ſimple, uniform, and never compoſed of more than two different repreſentations upon each moulding: which ought to be cut equally deep; be formed of the ſame number of parts; all nearly of the ſame dimenſions; in order to produce one even uninterrupted hue throughout; that ſo the eye may not be more ſtrongly attracted, by any particular part, than by the whole compoſition.

WHEN mouldings of the ſame form and ſize, are employed in one profile, they ſhould be enriched with the ſame kind of ornaments; by which means, the figure of the profile will be better apprehended; and the artiſt will avoid the imputation of a puerile minuteneſs, neither much to his own credit, nor of any advantage to his works.

IT muſt be obſerved, that all ornaments of mouldings, are to be regularly diſpoſed, anſwering perpendicularly above each other; as at the three columns in the Campo Vaccino: where the middles of the modillions, dentils, eggs, and other ornaments, are all in one perpendicular line. For, nothing is more careleſs, confuſed and unſeemly; than to diſtribute them without any order: as they are in many of the antiques, and in moſt of the buildings of this metropolis: the middle of an egg anſwers in ſome places to the edge of a dentil, in ſome to its middle, and in others

to

to the interval; all the reſt of the ornaments being diſtributed in the ſame ſlovenly, artleſs manner. The larger parts muſt regulate the ſmaller; all the ornaments in the entablature are to be governed by the modillions, or mutules; and the diſtribution of theſe, muſt depend on the intervals of the columns; and be ſo diſpoſed, that one of them, may come directly over the axis of each column. It is farther to be obſerved, that the ornaments muſt partake of the character of the order they enrich; thoſe uſed in the Doric and Ionic orders, are to be of ſimpler forms, and of larger bulk, than thoſe employed in the Compoſite or Corinthian.

When Frizes or other large members are to be enriched, the ornaments may be ſignificant; and ſerve to indicate the deſtination or uſe of the building, the rank, qualities, profeſſion and achievements of the owner: but it is a fooliſh practice to croud every part with arms, creſts, cyphers, and mottos; for the figures of theſe things are generally bad, or vulgar; and their introduction betrays an unbecoming vanity, in the maſter of the fabrick: Hogarth has humorouſly ridiculed this practice, by decorating a nobleman's crutch, with a coronet.

In ſacred places all obſcene, groteſque, and heatheniſh repreſentations ought to be avoided: for indecent fables, extravagant conceits, or inſtruments and ſymbols of Pagan worſhip, are very improper ornaments in ſtructures conſecrated to chriſtian devotion.

With regard to the manner of executing ornaments, it is to be remembered, that as in ſculpture a drapery is not eſtimable, unleſs its folds are contrived to grace and indicate the parts and articulations of the body it covers; ſo in architecture the moſt exquiſite ornaments loſe all their value, if they load, alter, or confuſe the form they are deſigned to enrich and adorn.

All ornaments of mouldings muſt therefore be cut into the ſolid, and never be applied on their ſurface, as Daviliere erroneouſly teaches: becauſe it alters both their figure and proportion. The profile muſt firſt be finiſhed plain, and afterwards be adorned; the moſt prominent parts of the ornaments, being made equal with the ſurface of the mouldings they enrich: and great care muſt be taken that the angles, or breaks, be kept perfect and untouched with ſculpture; for which reaſon it is cuſtomary at the angles of moſt mouldings, to place water leaves, or other plain leaves, the middle filament of which forms the angle, and keeps its outline entire.

The method of the ancient ſculptors, in the execution of architectonic ornaments, was, to aim at a perfect repreſentation of the object they choſe to imitate; ſo that the cheſnuts, acorns, or eggs, with which the ovolo is commonly enriched, are in the antiques, cut round, and almoſt entirely detached; as are likewiſe the berries, or beads on the aſtragal: which are generally as much hollowed into the ſolid of the body, as the moulding projects beyond it: but the leaves, ſhells, and flowers, that adorn the Cavetto, Cyma, Talon, and Torus, are kept flat, like the things they repreſent.

In the application of their ornaments, they obſerved to uſe ſuch as required a conſiderable relief, on mouldings that in themſelves are clumſy, as the Ovolo and Aſtragal; which by means of the deep inciſions made in them to form theſe enrich-

ments acquired an extraordinary lightneſs: but on more elegant parts, as the Cavetto, and Cyma, they employed thin bodies, which could be repreſented without entering too far into the ſolid. The ornaments of their Cornices were boldly marked, that they might be diſtinguiſhed from afar; but thoſe of the Baſes of Columns, or of Pedeſtals being nearer the eye, were more ſlightly expreſſed; as well on that account, as becauſe it would have been improper to weaken theſe parts, and impoſſible to keep them clean, had there been any deep cavities in them, to harbour duſt and filth.

WHEN objects are near, and liable to cloſe inſpection, every part of the ornament ſhould be expreſſed, and well finiſhed: but when they are much exalted, the detail may be ſlightly touched, or entirely neglected; for it is ſufficient if the general form be diſtinct, and the principal maſſes ſtrongly marked. A few rough ſtrokes from the hand of a ſkilful maſter, are much more effectual, than the moſt elaborate finiſhings of an artleſs imitator: which ſeldom conſiſting in more than ſmoothing and neatly rounding off the parts, are calculated to deſtroy, rather than to produce effect.

Of the ORDERS *of* ARCHITECTURE *in general.*

THE Orders of Architecture, as has been obſerved, are the baſis upon which the whole decorative part of the art is chiefly built, and towards which the attention of the artiſt muſt ever be directed, even where no orders are introduced. In them, originate moſt of the forms uſed in decoration; they regulate moſt of the proportions; and to their combination multiplied, varied, and arranged in a thouſand different ways, architecture is indebted, for its moſt ſplendid productions.

THESE orders, are different modes of building, ſaid, originally to have been imitated from the primitive huts; being compoſed of ſuch parts as were eſſential in their conſtruction, and afterwards alſo in the temples of antiquity; which, though at firſt ſimple and rude, were in the courſe of time, and by the ingenuity of ſucceeding architects, wrought up and improved, to ſuch a pitch of perfection, that they were by way of excellence diſtinguiſhed by the name of orders.

OF theſe there are five*: three ſaid to be of Grecian origin, are called Grecian orders; being diſtinguiſhed by the names of Doric, Ionic, and Corinthian: they exhibit three diſtinct characters of compoſition; ſuppoſed to have been ſuggeſted, by the diverſity of character in the human frame. The remaining two being of Italian origin, are called Latin orders; they are diſtinguiſhed by the names of Tuſcan and Roman, and were probably invented with a view of extending the characteriſtic bounds, on one ſide, ſtill farther towards ſtrength and ſimplicity; as on the other, towards elegance and profuſion of enrichments.

AT what time the orders were invented, or by whom improved to the utmoſt, remains at leaſt, doubtful. Of their improvement we can now only judge, from the

* Pl. Orders.

ſtructures

The Orders of the Antients.

OF the two Latin orders, the Tuſcan is ſaid to have been invented by the inhabitants of Tuſcany, before the Romans had intercourſe with the Greeks; or were acquainted with their arts: whence, it is called Tuſcan. Probably however, theſe people, originally a colony of Greeks; only imitated in the beſt manner they could, what they remembered in their own country: ſimplifying the Dorick, either to expedite their work, or perhaps to adapt it to the abilities of their workmen.

THE ſecond Latin order, though of Roman production, is but of modern adoption; the ancients never having conſidered it as a diſtinct order. It is a mixture of the Ionick and Corinthian, and is now diſtinguiſhed by the names of Roman, or Compoſite.

THE ingenuity of man, has hitherto, not been able to produce a ſixth order: though large premiums have been offered, and numerous attempts been made, by men of firſt rate talents, to accompliſh it. Such is the fettered human imagination, ſuch the ſcanty ſtore of its ideas, that Dorick, Ionic, and Corinthian, have ever floated uppermoſt; and all that has ever been produced, amounts to nothing more, than different arrangements and combinations of their parts, with ſome trifling deviations, ſcarcely deſerving notice; the whole generally tending more to diminiſh, than to increaſe the beauty of the ancient orders.

THE * ſubſtitution of cocks, owls, or lions heads, &c. for roſes; of trophies, cornucopias, lilies, ſphinxes, or even men, women, and children, for volutes; the introduction of feathers, lyres, flower de luces, or coronets, for leaves; are more alterations, than improvements; and the ſuſpenſion of feſtoons of flowers, or collars of knighthood, over the other enrichments of a capital; like lace on embroidery: rather tends to complicate and confuſe the form, than to augment its grace, or contribute to its excellence.

THE ſuppreſſion of parts of the ancient orders, with a view to produce novelty; has of late years, been practiſed among us, with full as little ſucceſs. And though it is not wiſhed to reſtrain ſallies of imagination, nor to diſcourage genius from attepmting ot invent; yet it is apprehended, that attempts to alter the primary forms invented by the ancients; and eſtabliſhed, by the concurring approbation of many ages, muſt ever be attended with dangerous conſequences; muſt always be difficult; and ſeldom, if ever ſucceſsful. It is like coining words; which, whatever may be their value, are at firſt but ill received; and muſt have the ſanction of time, to ſecure them a current reception.

AN order, is compoſed of †, two principal members; the Column, and the Entablature: each of which is divided into ‡ three principal parts. Thoſe of the column, are the baſe, the ſhaft, and the capital. Thoſe of the entablature, are the architrave, the frize, and the cornice. All theſe are again ſubdivided into many ſmaller parts; the diſpoſition, number, forms and dimenſions of which, characterize each order; and expreſs the degree of ſtrength or delicacy, richneſs or ſimplicity, peculiar to it.

* Pl. Compoſite Entablatures and Capitals. † Pl. of Primitive Buildings. ‡ Ibid.

THE

ſtructures and fragments of antiquity, built in different ages, and ſtill remaining to be ſeen in various parts of Europe, Aſia, and Africa. And of their origin little is known but from the relation of Vitruvius; the veracity of which, has been much queſtioned, and is probably not much to be depended upon.

" DORUS, ſays he, ſon of Helenes and the nymph Optica, king of Achaia and " of all the Peloponneſus; having formerly built a temple to Juno, in the ancient city " of Argos; this temple, happened to be in the manner which is called Dorick; " and was afterwards imitated in many others, built in the ſeveral cities of Achaia.

" ABOUT the ſame time the Athenians, after having conſulted the oracle of " Apollo at Delphos, by the common conſent of all Greece, ſent into Aſia thirteen " colonies; each, under the command of a ſeparate captain: but all, under the general " direction of Ion, ſon of Xuthus and Creuſa. Ion being arrived in Aſia, conquered " all Caria, and founded thirteen large cities; the inhabitants whereof, having ex- " pelled the Carians and Leleges, called the country Ionia; in honour of Ion their " leader: and erected temples, of which the firſt, dedicated to Apollo Panionius, " was built after the manner of thoſe they had ſeen in Achaia, which they called " Dorick; becauſe temples of the ſame ſort, had been erected in the cities of the " Dorians.

" BUT ſome time after, building a temple to Diana, different from theſe, and " of a more delicate ſtructure; being formed upon the proportions of a female body, " as the Dorick had been on thoſe of a robuſt man; and adorning the capitals of " their columns with volutes, to repreſent the curls of a woman's hair; and the ſhafts " with flutings, to expreſs the folds of her garment; they gave to this ſecond " manner of building the name of Ionick; becauſe it was invented and firſt uſed " by the Ionians.

" THE third ſort of columns, which are called Corinthian; and repreſent the " delicate figure of a young girl, owe their birth to the following accident.

* " A young woman of Corinth being dead, her nurſe placed on her tomb a " baſket, containing certain trinkets in which ſhe delighted when alive; covering " it with a tile, to ſhelter them from the weather. The baſket happened accident- " ally to be ſet on a root of the acanthus, which puſhing forth its leaves and ſprigs " in the ſpring, covered the ſides of it; and ſome of them, longer than the reſt, " being obſtructed by the angles of the tile, were forced downwards; and by " degrees, curled into the form of volutes.

" CALLIMACHUS, a celebrated ſculptor, paſſing near the tomb, obſerved the " baſket; and in how graceful a manner the leaves of the acanthus had ſurrounded " it: the form pleaſed him exceedingly, he imitated it on the tops of ſome columns, " which he afterwards executed at Corinth; eſtabliſhing and regulating, by this " model, the manner and proportions of the Corinthian order."

* Pl. Primitive Buildings.

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* Pl. Compoſite Entablatures and Capitals. † Pl. of Primitive Buildings. ‡ Ibid.

THE

THE ſimpleſt and moſt ſolid of all, is the * Tuſcan. It is compoſed of few and large parts, devoid of ornaments, and is of a conſtruction ſo maſſive, that it ſeems capable of ſupporting the heavieſt burdens; whence it is by Sir H. Wotton, compared to a ſturdy labourer, dreſſed in homely apparel.

THE Doric order†, next in ſtrength to the Tuſcan; and of a grave, robuſt, maſculine aſpect; is by Scamozzi, called the Herculean. Being the moſt ancient of all the orders, it retains more of the ‡ ſtructure of the primitive huts in its form, than any of the reſt; having triglyphs in the frize, to repreſent the ends of joiſts; and mutules in its cornice, to repreſent rafters, with inclined ſoffits, to expreſs their direction in the originals, from which they were imitated. Its column too, is often ſeen in ancient works, executed without a baſe, in imitation of the trees, uſed in the firſt buildings, without any plinths to raiſe them above the ground. Freart de Chambrai ſpeaking of this order, obſerves, that delicate ornaments are repugnant to its characteriſtic ſolidity; and that it ſucceeds beſt, in the ſimple regularity of its proportions: "noſegays and garlands of flowers, ſays he, grace not a Hercules, who "always appears more becomingly, with a rough club and lion's ſkin. For there are "beauties of various ſorts, and often ſo diſſimilar in their natures, that thoſe which "may be highly proper on one occaſion, may be quite the reverſe, even ridiculouſly "abſurd, on others."

THE Ionic§, being the ſecond of the Grecian orders, holds a middle ſtation between the other two; and ſtands in equipoiſe between the grave ſolidity of the Doric, and the elegant delicacy of the Corinthian. Among the antiques however, we find it in different dreſſes; ſometimes plentifully adorned, and inclining moſt towards the Corinthian; ſometimes more ſimple, and bordering on Dorick plainneſs; all according to the fancy of the architect, or nature of the ſtructure where employed. It is throughout, of a more ſlender conſtruction than either of the afore-deſcribed orders; its appearance, though ſimple, is graceful and majeſtic; its ornaments ſhould be few; rather neat than luxuriant; and as there ought to be nothing exaggerated, or affectedly ſtriking in any of its parts, it is (not unaptly) compared to a ſedate matron, rather in decent than magnificent attire.

THE Corinthian‖, ſays Sir Henry Wotton, is a column laſciviouſly decked, like a wanton courtezan. Its proportions are elegant in the extreme; every part of the order is divided into a great variety of members; and abundantly enriched with a diverſity of ornaments. "The ancients, ſays De Chambray, aiming at the repre-"ſentation of a feminine beauty, omitted nothing, either calculated to embelliſh, "or capable of perfecting their work." And he obſerves, "that in the many exam-"ples left of this order, ſuch a profuſion of different ornaments is introduced, that "they ſeem to have exhauſted imagination, in the contrivance of decorations for "this maſter-piece of the art. Scamozzi calls it the Virginal; and it certainly has all "the delicacy in its form, with all the gaiety, gaudineſs, and affectation in its dreſs, "peculiar to young women."

* Pl. of Orders. † Pl. of Orders. ‡ Pl. Primitive Buildings. § Pl. of Orders. ‖ Pl. of Orders.

THE Compoſite order*, being properly ſpeaking, only a different ſpecies of the Corinthian, diſtinguiſhed from it merely by ſome peculiarities in the capital, or other trifling deviations; retains in a great meaſure the ſame character, and requires no particular deſcription.

TO give a ſtriking idea of theſe different properties, and to render the compariſon between the orders more eaſy, I have repreſented † them all of the ſame height; by which means the gradual increaſe of delicacy and richneſs, is eaſily perceivable; as are likewiſe the relations between the intercolumniations of the different orders, and the proportions which their pedeſtals, impoſts, archivolts, and other parts, with which they are on various occaſions accompanied; bear to each other.

THE proportions of the orders were, by the ancients, formed on thoſe of the human body; and conſequently, it could not be their intention, to make a Corinthian column (which as Vitruvius obſerves, is to repreſent the delicacy of a young girl), as thick and much taller, than a Doric one; which is deſigned to repreſent the bulk and vigour of a muſcular full grown man: columns ſo formed, could not be applied to accompany each other, without violating the laws, both of real and apparent ſolidity; as in ſuch caſe, the Doric dwarf, muſt be cruſhed under the ſtrapping Ionic, or gigantick Corinthian virago; triumphantly riding uppermoſt: and reverſing the natural, the neceſſary, predominance in the compoſition.

NEVERTHELESS Vignola, Palladio, Scamozzi, Blondel, Perrault, and many others, if not all, the great modern artiſts; have conſidered them in this light: that is, they have made the diameters of all their orders the ſame, and conſequently their heights increaſing: which, beſides giving a wrong idea of the character of theſe different compoſitions, has laid a foundation for many erroneous precepts, and falſe reaſonings, to be found in different parts of their works; of which, notice will in due time be taken.

IN the opinion of Scamozzi, columns ſhould not be leſs than ſeven of their diameters in height, nor more than ten; the former being according to him, a good proportion in the Tuſcan; and the latter in the Corinthian order. The practice of the ancients in their beſt works, being conformable to this precept; I have, as authoriſed by the doctrine of Vitruvius, made the Tuſcan column ſeven diameters in height, and the Doric eight; the Ionic nine, as Palladio and Vignola have done; and the Corinthian and Compoſite ten: which laſt meaſure, is a mean between the proportions obſerved in the Pantheon, and at the three columns in Camp Vaccino; both which, are eſteemed moſt excellent models of the Corinthian order.

THE height of the entablature, in all the orders, I have made one quarter of the height of the column; which was the common practice of the ancients; who, in all ſorts of entablatures, ſeldom exceeded or fell much ſhort, of that meaſure.

* Pl. Orders. † Pl. Orders.

NEVERTHELESS

NEVERTHELESS Palladio, Scamozzi, Alberti, Barbaro, Cataneo, De l'Orme, and others of the modern architects; have made their entablatures much lower in the Ionic, Compoſite, and Corinthian orders, than in the Tuſcan or Doric. This, on ſome occaſions, may not only be excuſable but highly proper; particularly where the intercolumniations are wide, (as in a ſecond or third order;) in private houſes, or inſide decorations; where lightneſs ſhould be preferred to dignity, and where expence, with every impediment to the conveniency of the fabrick, are carefully to be avoided: but to ſet entirely aſide a proportion, which ſeems to have had the general approbation of the ancient artiſts, is ſurely preſuming too far.

THE reaſon alledged, in favour of this practice, is the weakneſs of the columns in the delicate orders; which renders them unfit for ſupporting heavy burdens. And where the intervals are fixed, as in a ſecond order; or in other places, where wide intercolumniations are either neceſſary, or not to be avoided; the reaſon is certainly ſufficient: but, if the artiſt is at liberty to diſpoſe his columns at pleaſure, the ſimpleſt and moſt natural way of conquering the difficulty, is to employ more columns: by placing them nearer to each other, as was the cuſtom of the ancients. And it muſt be remembered, that though the height of the entablature in a delicate order, is made the ſame as in a maſſive one; yet it will not, either in reality or in appearance, be equally heavy*; for the quantity of matter in the Corinthian cornice A, is conſiderably leſs than in the Tuſcan cornice B; and the increaſed number of parts compoſing the former of theſe, will of courſe make it appear far lighter, than the latter.

WITH regard to the parts of the entablature, I have followed the method of Serlio, in his Ionic and Corinthian orders; and of Perrault, who, in all his orders, excepting the Doric, divides the whole height of the entablature into ten equal parts: three of which he gives to the architrave, three to the frize, four to the cornice. And in the Doric order, he divides the whole height of the entablature into eight parts; of which two are given to the architrave, three to the frize, and three to the cornice.

THESE meaſures, deviate very little from thoſe obſerved in the greateſt number of antiques now extant at Rome; where they have ſtood the teſt of many ages. And their ſimplicity, renders them ſingularly uſeful in compoſition, as they are eaſily remembered, and eaſily applied.

OF two manners uſed by architects, to determine the dimenſions of the mouldings, and the leſſer parts that compoſe an order, I have choſen the ſimpleſt; readieſt and moſt accurate; which is by the module, or ſemi-diameter of the column, taken at the bottom of the ſhaft: and divided into thirty minutes.

THERE are indeed many, who prefer the method of meaſuring by equal parts; imagining beauty to depend, on the ſimplicity and accuracy of the relations, exiſting between the whole body, and its members: and alledging, that dimenſions, which

* Fig. 2, Plate of Mouldings.

have evident affinities, are better remembered than thoſe, whoſe relations are too complicated to be immediately apprehended.

WITH regard to the former of theſe ſuppoſitions, it is evidently falſe: for the real relations, ſubſiſting between diſſimilar figures, have no connection with the apparent ones. And with regard to the latter, it may or may not be the caſe, according to the degree of accuracy with which the partition is made. For inſtance, in dividing the Attick baſe, (which may be numbered among the ſimpleſt compoſitions in architecture) according to the different methods; it appears to me as eaſy, to recollect the numbers 10, $7\frac{1}{2}$, 1, $4\frac{3}{4}$, 1, $5\frac{3}{4}$; as to remember that the whole height of the baſe, is to be divided into three equal parts, that two of theſe three, are to be divided into four; that three of the four, are to be divided into two; and that one of the two, is to be divided into ſix; which are to be divided into three.

BUT, admitting it were eaſier to remember the one than the other; it doth not ſeem neceſſary, nor even adviſable, in a ſcience where a vaſt diverſity of knowledge is required, to burden the memory with a thouſand trifling dimenſions. If the general proportions be known, it is all that is requiſite in compoſing; and when a deſign is to be executed, it is eaſy to have recourſe to figured drawings, or to prints. The uſe of the module is univerſal; throughout the order and all its appurtenances; it marks their relations to each other, and being ſuſceptible of the minuteſt diviſions, the dimenſions may be ſpeedily determined with the utmoſt accuracy; while the trouble, confuſion, uncertainty, and loſs of time, in meaſuring by equal parts, are very conſiderable; ſeeing it is neceſſary to form almoſt as many different ſcales, as there are different parts to be divided.

COLUMNS, in imitation of trees, from which they drew their origin; are tapered in their ſhafts. In the antiques, the diminution is variouſly performed; ſometimes beginning from the foot of the ſhaft, at others from one quarter, or one third of its height; the lower part being left perfectly cylindrical. The former of theſe methods was moſt in uſe amongſt the ancients, and being the moſt natural, ſeems to claim the preference; though the latter has been almoſt univerſally practiſed by modern artiſts: from a ſuppoſition, perhaps, of its being more graceful: as it is more marked and ſtrikingly perceptible.

THE firſt architects, ſays Monſ. Auzoult, probably made their columns in ſtraight lines, in imitation of trees; ſo that their ſhaft was a fruſtrum of the cone: but finding this form abrupt and diſagreeable, they made uſe of ſome curve, which, ſpringing from the extremities of the ſuperior and inferior diameters of the column, ſwelled beyond the ſides of the cone, and by that means gave a more pleaſing figure to the outline. Vitruvius, in the ſecond chapter of his third book, mentions this practice; but in ſo obſcure and curſory a manner, that his meaning has not been underſtood; and ſeveral of the modern architects, intending to conform themſelves to his doctrine, have made the diameters of their columns greater in the middle, than at the foot of the ſhaft. Leon Baptiſta Alberti, with others of the Florentine and Roman architects, carried this practice to a very abſurd exceſs; for which they have been juſtly blamed: as it is neither natural, reaſonable, nor beautiful.

MONSIEUR

MONSIEUR AUZOULT farther obſerves, that a column, ſuppoſing its ſhaft to be the fruſtrum of a cone, may have an additional thickneſs in the middle, without being ſwelled there, beyond the bulk of its inferior parts; and ſuppoſes the addition mentioned by Vitruvius, to ſignify nothing more, than the increaſe towards the middle of the column, occaſioned by changing the ſtraight line, which at firſt was in uſe, into a curve.

THIS ſuppoſition, is exceedingly juſt; and founded on what is obſervable in the works of antiquity; where there is no ſingle inſtance of a column thicker in the middle, than at the bottom, though all, or moſt of them, have the ſwelling hinted at by Vitruvius, all of them being terminated by curves; ſome few granite columns excepted, which are bounded by ſtraight lines: a proof, perhaps, of their antiquity; or of their having been wrought in the quarries of Egypt, by unſkilful workmen.

BLONDEL in his book entitled *Reſolution des quatre principaux Problémes d'Architecture*, teaches various manners of diminiſhing columns; the beſt and ſimpleſt of which, is by means of the inſtrument invented by Nicomedes, to deſcribe the firſt conchoid: for this, being applied at the bottom of the ſhaft, performs at one ſweep, both the ſwelling and the diminution; giving ſuch a graceful form to the column, that it is univerſally allowed to be the moſt perfect practice hitherto diſcovered. The columns in the Pantheon, accounted the moſt beautiful among the antiques, are traced in this manner; as appears by the exact meaſures of one of them, to be found in Deſgodetz's antiquities of Rome.

TO give an accurate idea of the operation, it will be neceſſary firſt to deſcribe Vignola's method of diminution, on which it is grounded. "As to this ſecond "method, ſays Vignola, it is a diſcovery of my own; and although it be leſs "known than the former, it will be eaſily comprehended by the figure. Having "therefore determined the meaſures of your column, (that is to ſay, the height of "the ſhaft, and its inferior and ſuperior diameters), * draw a line indefinitely from "C through D, perpendicular to the axis of the column:" this done, ſet off the diſtance C D, which is the inferior ſemi-diameter, from A, the extreme point of the ſuperior ſemi-diameter; to B, a point in the axis. Then from A, through B, draw the line A B E, which will cut the indefinite line C D in E; and from this point of interſection E, draw through the axis of the column any number of rays, as E b a, on each of which, from the axis towards the circumference, ſetting off the interval C D, you may find any number of points a, a, a, through which if a curve be drawn, it will deſcribe the ſwelling and diminution of the column.

THOUGH this method be ſufficiently accurate for practice, eſpecially if a conſiderable number of points be found, yet, ſtrictly ſpeaking, it is defective; as the curve muſt either be drawn by hand, or by applying a flexible ruler to all the points; both which are liable to variations. Blondel therefore, to obviate this objection, (after having proved the curve paſſing from A to C through the points a, a, to be

* Fig. 3, Pl. of Mouldings.

of the ſame nature with the firſt conchoid of the ancients), employed the inſtrument of Nicomedes to deſcribe it; the conſtruction of which is as follows.

HAVING determined, as above, the length of the ſhaft, with the inferior and ſuperior diameters of the column, and having likewiſe found the length of the line C D E; take three rulers, either of wood or metal, as F G, I D, and A H; of which let F G and I D be faſtened together at right angles in G. Cut a dove-tail groove in the middle of F G, from top to bottom; and, at the point E on the ruler I D, (whoſe diſtance, from the middle of the groove in F G, is the ſame as that of the point of interſection from the axis of the column), fix a pin; then on the ruler A H ſet off the diſtance A B, equal to C D the inferior ſemi-diameter of the column, and at the point B fix a button, whoſe head muſt be exactly fitted to the groove made in F G, in which it is to ſlide; and, at the other extremity of the ruler A H, cut a ſlit or channel from H to K, whoſe length muſt not be leſs than the difference of length between E B and E D, and whoſe breadth muſt be ſufficient to admit the pin fixed at E, which muſt paſs through the ſlit, that the ruler may ſlide thereon.

THE inſtrument being thus compleated; if the middle of the groove, in the ruler F G, be placed exactly over the axis of the column, it is evident that the ruler A H, in moving along the groove, will with its extremity A, deſcribe the curve A a a C; which curve is the ſame as that produced by Vignola's method of diminution; ſuppoſing it done with the utmoſt accuracy: for the interval A B, a b, is always the ſame: and the point E, is the origin of an infinity of lines, of which the parts B A, b a, b a, extending from the axis to the circumference, are equal to each other, and to D C. And if the rulers be of an indefinite ſize, and the pins at E and B be made to move along their reſpective ruler, ſo that the intervals A B and D E may be augmented or diminiſhed at pleaſure, it is likewiſe evident, that the ſame inſtrument may be thus applied to columns of any ſize.

IN the remains of antiquity, the quantity of the diminution is various; but ſeldom leſs than one eighth of the inferior diameter of the column: nor more than one ſixth of it. The laſt of theſe is by Vitruvius, eſteemed the moſt perfect; and Vignola has employed it in four of his orders, as I have done in all of them: there being no reaſon for diminiſhing the Tuſcan column more, in proportion to its diameter, than any of the reſt; though it be the doctrine of Vitruvius, and the practice of Palladio, Vignola, Scamozzi, and almoſt all the modern architects. On the contrary, as Monſieur Perrault juſtly obſerves, its diminution ought rather to be leſs than more; as it actually is in the Trajan column, being there only one ninth of the diameter. For even when the ſame proportion is obſerved through all the orders; the abſolute quantity of the diminution in the Tuſcan order, ſuppoſing the columns of the ſame height, exceeds that in the Corinthian, in the ratio of ten to ſeven; and if, according to the common practice, the Tuſcan column be leſs by one quarter at the top, than at its foot; the difference between the diminution in the Tuſcan and in the Corinthian columns, will be as fifteen to ſeven; and in the Tuſcan and Doric nearly as fifteen to nine: ſo that notwithſtanding there is a very conſiderable difference between the lower diameters of a Tuſcan and of a Doric column, both being of the ſame height, yet the diameters at their top will be nearly equal; and conſequently the Tuſcan column, will in reality be no ſtronger than the Doric one, which is contrary to the character of the order.

VITRUVIUS

VITRUVIUS allots different degrees of diminution, to columns of different heights; giving to thoſe of fifteen foot, one ſixth of their diameter; to ſuch as are from twenty to thirty foot, one ſeventh; and when they are from forty to fifty foot high, one eighth only: obſerving, that as the eye is eaſily deceived in conſidering diſtant objects, which always ſeem leſs than they really are; it is neceſſary to remedy the deception, by an increaſe of their dimenſions: otherwiſe the work will appear ill-conſtructed and diſagreeable to the eye.

MOST of the modern architects have taught the ſame doctrine: but Perrault in his notes, both on this paſſage, and on the ſecond chapter of the ſixth book, endeavours to prove the abſurdity thereof. In fact, it is on moſt occaſions, if not on all, an evident error; which Vitruvius and his followers have probably been led into, through neglect of combining circumſtances. For, if the validity of Perrault's arguments be not aſſented to, and it is required to judge according to the rigour of optical laws; it muſt be remembered, that the proper point of view, for a column of fifty foot high, is not the ſame as for one of fifteen: but on the contrary more diſtant, in the ſame proportion, as the column is higher: and that conſequently, the apparent relation between the lower and upper diameters of the column will be the ſame, whatever be its ſize. For, if we ſuppoſe * A to be a point of view, whoſe reſpective diſtance from each of the columns f g, F G, is equal to the reſpective heights of each, the triangles f A g, F A G, will be ſimilar; and A f, or A h, which is the ſame, will be to A g, as A F, or its equal A H, is to A G: therefore if d e, be in reality to b c, as D E is to B C, it will likewiſe be apparently ſo; for the angle d A e, will then be to the angle b A c, as the angle D A E, is to the angle B A C; and if the real relations differ, the apparent ones will likewiſe differ.

I HAVE ſuppoſed the eye of the ſpectator, to be in a line perpendicular to the foot of the ſhaft; but if the columns be proportionably raiſed to any height above the eye, the argument will ſtill remain in force; as the point of view muſt of courſe be proportionably more diſtant: and even when columns are placed immediately on the ground, which ſeldom or ever is the caſe, the alteration occaſioned by that ſituation, is too trifling to deſerve notice.

WHEN therefore a certain degree of diminution, which by experience is found pleaſing, has been fixed upon, there will be no neceſſity for changing it, whatever be the height of the column; provided, the point of view is not limited: but in cloſe places, where the ſpectator is not at liberty to chuſe a proper diſtance for his point of ſight, the architect, if he inclines to be ſcrupulouſly accurate, may vary. Though it is in reality, a matter of no importance; as the nearneſs of the object, will render the image thereof indiſtinct; and conſequently, any ſmall alteration imperceptible.

SCAMOZZI, who eſteems it an eſſential property of the delicate orders, to exceed the maſſive ones in height; has applied the above cited precept of Vitruvius,

* Fig. 4, Pl. of Mouldings.

to the different orders: having diminiſhed the Tuſcan column one quarter of its diameter; the Doric one fifth; the Ionic one ſixth; the Roman one ſeventh; and the Corinthian one eighth. In the foregoing part of this chapter, I have ſhewn the fallacy of his notion, with reſpect to the heights of his orders, and likewiſe endeavoured to prove the error of diminiſhing the Tuſcan column, more than any of the others; ſo that it will be needleſs, to ſay any thing farther on theſe ſubjects now; for as the caſe is ſimilar, the ſame arguments may be employed in confutation thereof.

My intention being to give an exact idea of the orders of the ancients, I have repreſented them under ſuch figures and proportions, as appear to have been moſt in uſe in the eſteemed works of the Romans; who, in the opinion of Leon Bap. Alberti, and other eminent writers, carried architecture to its perfection. It muſt not however be imagined that the ſame general proportions will on all occaſions ſucceed. They are chiefly collected from the temples, and other public ſtructures of antiquity, and may by us be employed in churches, palaces, and other buildings of magnificence: where majeſty and grandeur of manner, ſhould be extended to their utmoſt limits; and where the whole compoſition being generally large, the parts require an extraordinary degree of boldneſs, to make them diſtinctly perceptible, from the proper general points of view. But in leſs conſiderable edifices, and under various circumſtances of which I ſhall hereafter give a detail, more elegant proportions may often be preferable.

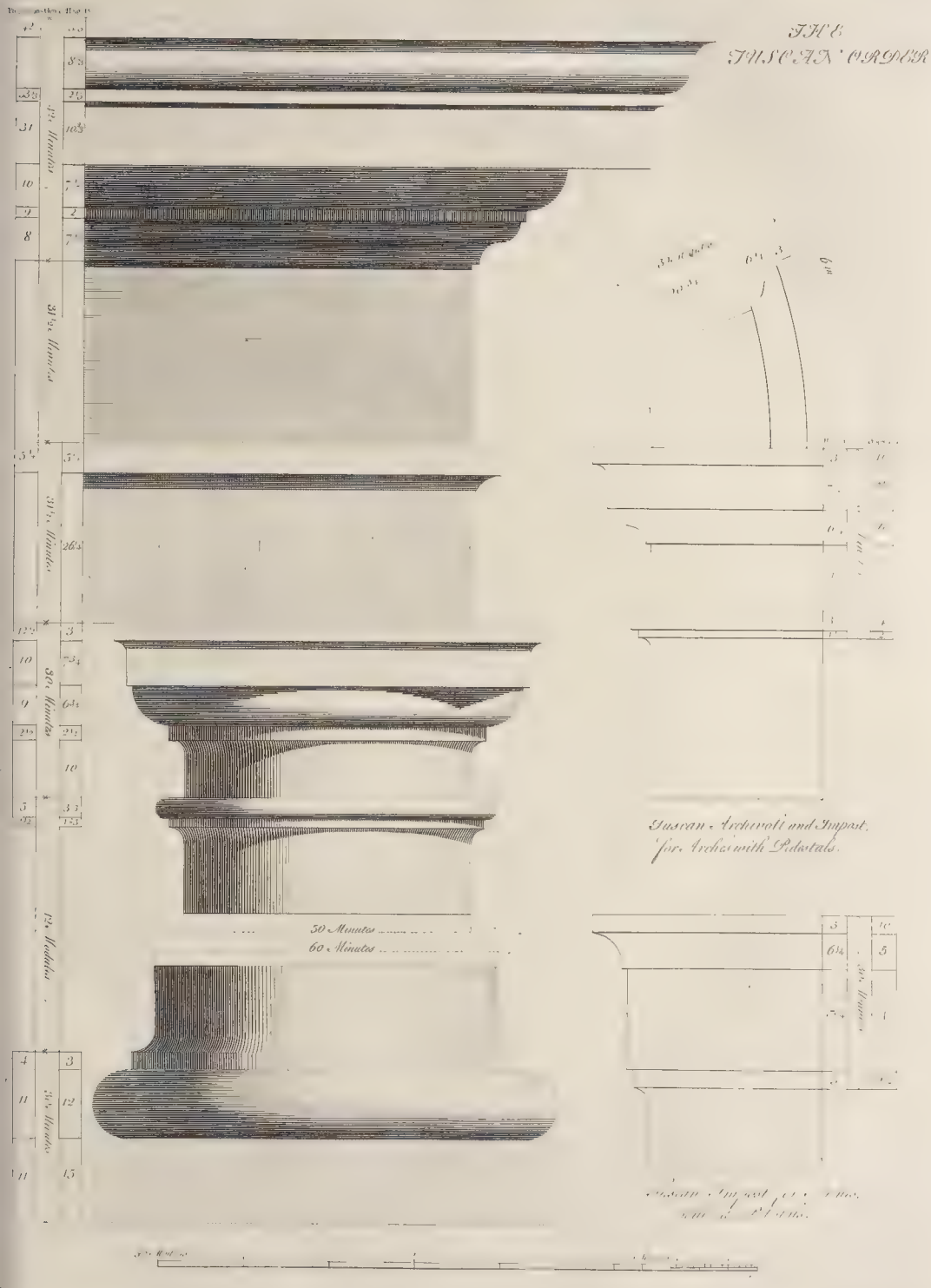
Of the TUSCAN ORDER.

AMONG the antiques, there are no remains of a regular Tuſcan order; the doctrine of Vitruvius upon that ſubject, is obſcure; and the profiles of Palladio, Scamozzi, Serlio, De l'Orme, and Vignola, are all, more or leſs imperfect.

Of the two deſigns left us by Palladio, that taken from the deſcription of Vitruvius, is unpleaſingly ruſtic. The other again is too rich, and injudiciouſly compoſed. That of Scamozzi is yet richer, and much too like the Doric. Serlio's is heavy; and Vignola's, though ſuperior to the others, is defective in the cornice, which is clumſey, compared with the reſt of the order; ill proportioned in its parts, and incorrectly profiled: as it finiſhes with a ſupporting moulding, which has nothing to ſupport; and conſequently muſt excite the idea of a mutilation: the more ſtriking, as the general outline of the compoſition, reſembles exactly the bed moulds of the Ionic cornice; ſuppoſing the dentil band left uncut, as is often the caſe.

In the deſign here annexed, I have chiefly imitated Vignola's, who in this order has been almoſt univerſally followed. Even Inigo Jones, who was ſo cloſe an adherer to Palladio; has employed Vignola's profile, in his York ſtairs, and others, his buildings. But, as the cornice appears to me, far inferior to the reſt of the compoſition, I have not ſcrupled to reject it; and to ſubſtitute in its place, that of Scamozzi; with

THE TUSCAN ORDER



Tuscan Architrave and Impost for Arches with Pedestals.

with ſuch alterations as were evidently neceſſary, to render it perfect—Conformable to the doctrine of Vitruvius, and to the almoſt general practice of the moderns, I have given to the height of the column, fourteen modules, or ſeven diameters; and to that of the whole entablature, three and a half modules; which being divided into ten equal parts, three of them are for the height of the architrave, three for that of the frize, and the remaining four, for the cornice. The capital is in height, one module; the baſe, including the lower cincture of the ſhaft, is alſo one module; and the ſhaft, with its upper cincture and aſtragal, twelve modules. Theſe are the general meaſures of the order.

WITH reſpect to the particular dimenſions of the minuter parts, they may be collected from the deſign; whereon the heights and projections of each member, are figured; the latter of theſe being counted from perpendiculars, raiſed at the extremities of the inferior and ſuperior diameters of the ſhaft: a method, preferable to that of De Chambray and Deſgodetz, who count from the axis of the column; becauſe, the relations between the heights and projections of the parts, are more readily diſcoverable: and, whenever a cornice or entablature, is to be executed without a column, which frequently happens, it requires no additional time or labour, as the trouble of deducting from each dimenſion, the ſemi-diameter of the column is ſaved.

SCAMOZZI, that his baſes might be of the ſame height in all the orders, has given to the Tuſcan one, excluſive of the cincture, half a diameter. But I have rather choſen to imitate Vignola and Palladio, who in this order have deviated from the general rule: for as the Tuſcan baſe is compoſed of two members only, inſtead of ſix, which conſtitute the other baſes, it becomes much too clumſey, when the ſame general proportion is obſerved.

THE Tuſcan order admits of no ornaments of any kind: on the contrary, it is ſometimes cuſtomary to repreſent on the ſhaft of its column, ruſtic cinctures; as at the palace Pitti in Florence; that of the Luxembourg in Paris; York Stairs in London; and many other buildings of note. This practice though frequent, and to be found in the works of many celebrated architects, is not always excuſable; and ſhould be indulged with caution; as it hides the natural figure of the column, alters its proportions, and affects the ſimplicity of the whole compoſition. There are few examples of theſe bandages in the remains of antiquity; and, in general, it will be adviſeable to avoid them in all large deſigns, reſerving the ruſtic work for the intercolumniations, where it may be employed with great propriety, to produce an oppoſition; which will help to render the aſpect of the whole compoſition, diſtinct and ſtriking.

BUT in ſmaller works, of which the parts, being few, are eaſily comprehended, they may be ſometimes tolerated; ſometimes even recommended; as they ſerve to diverſify the forms, are productive of ſtrong contraſts, and contribute very conſiderably to the maſculine, bold aſpect of the compoſition. Le Clerc thinks them proper in gates of citadels and priſons, of which the entrances ſhould be terrifick; and they are likewiſe fit for gates to gardens, or parks, for grottos, fountains, and baths; where elegance of form, and neatneſs of workmanſhip, would be out of character. De l'Orme, who was exceeding fond of theſe cinctures, has employed

them in ſeveral parts of the Thuilleries covered with arms, cyphers, and other enrichments: but this ſeems abſurd, for they can never be conſidered in any other light, than as parts, which to avoid expence and trouble, were left unfiniſhed. We likewiſe find in different parts of the Louvre, vermiculated ruſtics, of which the tracts repreſent flowers de luce, and other regular figures: a practice, ſtill more unnatural than the forementioned; though Monſieur Daviler, very gravely tells us, that it ſhould always be done with propriety; and expreſs a relation to the owner of the ſtructure: that is, the figures ſhould repreſent his arms, his creſt, motto, cypher, and ſo forth: as if worms were draughtſmen, and underſtood heraldry.

In the plates of deſigns for gates, doors and windows, and likewiſe in thoſe of different compoſitions, at the end of the book; are given ſeveral deſigns of ruſtick columns, and other ruſtick work; all collected from buildings of note, in different parts of Europe: and for the manner of executing them, as it cannot well be deſcribed, the ſtudent is referred to various parts of Somerſet Place, to the Horſe Guards, the Treaſury, the Doric entrance of the King's Mews, the gate of Burlington Houſe, &c. in all which, the different kinds of ruſtication, are managed with taſte, and command of the chiſſel.

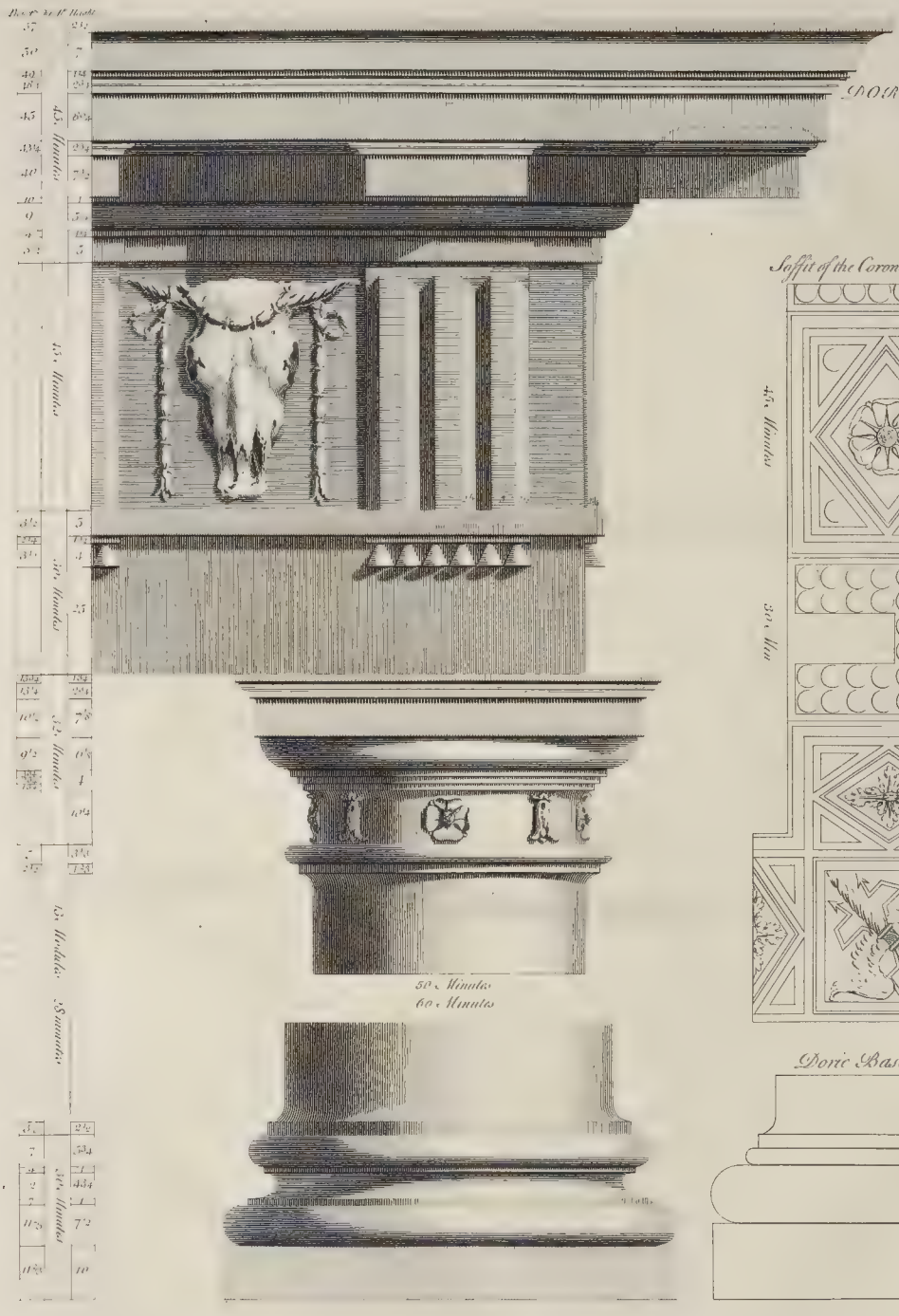
De Chambray, in the introduction to his parallel of ancient and modern architecture, treats the Tuſcan order with great contempt; and baniſhes it to the country: as unworthy a place, either in temples or palaces. But, in the ſecond part of the ſame work, he is more indulgent; for tho he rejects the entablature, the column is taken into favour, "and compared to a queen, ſeated on a throne; ſur-"rounded with all the treaſures of fame, and diſtributing honours to her minions; "while other columns only ſeem to be ſervants and ſlaves of the buildings they "ſupport."

The remainder of this paſſage, too long to be here inſerted at full length; is calculated to degrade and totally to exclude from buildings, the Tuſcan order: but by a different mode of employing, and dreſſing the column, to exalt its conſequence; increaſe its majeſty and beauty; ſo as to ſtand an advantageous compariſon with any of the reſt; he therefore wiſhes, in imitation of the ancient architects, to conſecrate the Tuſcan column, to the commemoration of great men, and their glorious actions; inſtancing Trajan's column, one of the proudeſt monuments of Roman ſplendor, which is of that order; was erected by the ſenate and people of Rome, in acknowledgment of his ſervices, and has contributed more to immortalize that emperor, than the united pens of all hiſtorians. He farther inſtances the Antonine column, likewiſe erected at Rome on a ſimilar occaſion, in honour of Antoninus Pius: and another of the ſame ſort at Conſtantinople, raiſed to the emperor Theodoſius, after his victory over the Scythians: both which, prove by their reſemblance to the Trajan column, that this ſort of appropriation recommended by him; had paſſed into a rule, among the ancient maſters of the art.

I shall not here diſpute the juſtneſs of Mr. De Chambray's remarks; but may venture to affirm, that not only the Tuſcan column, but the whole order, as repreſented in the annexed deſign, (which, being in fact the production of Vignola and Scamozzi, I may praiſe without the imputation of vanity,) is extremely beautiful, a

uſeful,

The Doric Order



uſeful, even neceſſary gradation in the art; and for its purpoſes, inferior to none of the reſt.

THE Tuſcan, order as it conveys ideas of ſtrength and ruſtic ſimplicity, is very proper for rural purpoſes; and may be employed in farm houſes, in barns and ſheds for implements of huſbandry, in ſtables, maneges and dog-kennels, in green houſes, grottos and fountains, in gates of parks and gardens, and generally wherever magnificence is not required, and expence is to be avoided. Serlio recommends the uſe thereof in priſons, arſenals, treaſuries, ſea ports and gates of fortified places; and Le Clerc obſerves, that though the Tuſcan order as treated by Vitruvius, by Palladio, and ſome others, ought to be entirely rejected; yet according to the compoſition of Vignola, there is a beauty in its ſimplicity, which recommends it to notice; and entitles it to a place, both in private and public buildings: as, in colonades and porticos, ſurrounding ſquares or markets; in granaries or ſtorehouſes; and even in royal palaces: to adorn the lower apartments, offices, ſtables and other places, where ſtrength and ſimplicity are required; and where richer, or more delicate orders would be improper.

IN conformity to the doctrine and practice before-mentioned, ſeven diameters or fourteen modules, have been given to the height of the Tuſcan column; a proportion, very proper for rural or military works, where an appearance of extraordinary ſolidity is required: but in town buildings, intended for civil purpoſes; or in interior decorations; the height of the column, may be fourteen and a half, or even fifteen modules, as Scamozzi makes it; which augmentation, may be entirely in the ſhaft, without changing any meaſures either of the baſe or capital. Nor need the entablature be altered; for, as it is compoſed of few parts, it will be ſufficiently bold; although its height be ſomewhat leſs, than one quarter of the height of the column.

Of the DORIC ORDER.

IN the parallel, are given three profiles of the Doric order: one of which is taken from the theatre of Marcellus, and the other two, are copied by Pietro Ligorio, from various fragments of antiquity, in and near Rome. Vignola's ſecond Doric profile, bears a near reſemblance to the moſt beautiful of theſe, and was not improbably collected from the ſame antique, which Ligorio copied: though it muſt be owned, that Vignola has, in his compoſition, far exceeded the original: having omitted the many trivial, inſignificant mouldings, with which that is over-loaded; and in various other reſpects, improved both its form and proportions.

THIS profile of Vignola's, being compoſed in a greater ſtile, and in a manner more characteriſtic of the order, than any other, I have choſen for my model; having, in the general form and proportions, ſtrictly adhered to the original; though in particular members I have not ſcrupled to vary, when obſervation taught me they might be improved.

VIGNOLA, as appears by the preface to his rules; ſuppoſed, that the graceful and pleaſing aſpect of Architectonic objects, was occaſioned by the harmony and ſimplicity of the relations exiſting between their parts; and in compoſing his profiles, he conſtantly regulates his meaſures, by theſe ſimple affinities; imagining the deviations from them in his antique models, to proceed, rather from the inaccurate execution of the workmen, than from any premeditated deſign in the contriver. To this notion may be aſcribed, many little defects in the proportions of his mouldings, and minuter members; which, though trifling in themſelves, are yet, from the ſmallneſs of the parts where they happen to be, of conſequence; and eaſily perceivable, by a judicious eye. Theſe I have therefore endeavoured to correct, not only in this, but in others of his orders; which, from their conformity to the beſt antiques, I have in the courſe of this work, choſen to imitate.

IT has already been obſerved, that the real relations, ſubſiſting between diſſimilar figures, have no connection with the apparent: the form, and ſituation, of the object viewed, ever altering the affinity; and it is a truth, too evident to require demonſtration. No one will deny, for inſtance, that the ovolo in the annexed Doric cornice*, viewed in its proper elevation, will appear much larger than the capital of the triglyph, under and contiguous to it; though they are in reality, nearly of the ſame dimenſions: and, if the ſame ovolo were placed as much below the level of the ſpectator's eye, as it is in the preſent caſe above; it is likewiſe evident, that it would appear conſiderably lower, than any flat member of the ſame height. Theſe things being ſo, a ſtrict attachment to harmonic relations, ſeems entirely out of the queſtion; ſince, what is really in perfect harmony, may in appearance produce the moſt jarring diſcord.

PERFECT proportion, in architecture, if conſidered only with regard to the relations between the different objects in a compoſition; and, as it merely relates to the pleaſure of the ſight; ſeems to conſiſt in this: that thoſe parts which are either principal or eſſential, ſhould be contrived to catch the eye ſucceſſively, from the moſt conſiderable, to the leaſt, according to their degrees of importance in the compoſition; and impreſs their images on the mind, before it is affected by any of the ſubſervient members: yet, that theſe ſhould be ſo conditioned, as not to be entirely abſorbed, but be capable of raiſing diſtinct ideas likewiſe; and ſuch, as may be adequate to the purpoſes, for which theſe parts are deſigned.

THE different figures and ſituations of the parts may, in ſome degree, contribute toward this effect: for ſimple forms will operate more ſpeedily than thoſe that are complicated; and ſuch as project, will be ſooner perceived, than ſuch as are more retired: but dimenſion ſeems to be the predominant quality; or that which acts moſt powerfully on the ſenſe: and this, it is apprehended, can only be diſcovered by experience; at leaſt to any degree of accuracy. When therefore a number of parts, arranged in a particular manner, and under particular dimenſions, excites, in the generality of judicious ſpectators, a pleaſing ſenſation; it will be prudent on every occaſion, where the ſame circumſtances ſubſiſt, to obſerve exactly

* Pl. Doric Order.

the

the ſame arrangement and proportions; notwithſtanding they may in themſelves appear irregular, and unconnected.

IN compoſing the orders and other decorations, which are contained in the preſent publication, this method has conſtantly been obſerved; the author having himſelf, with that view, meaſured with the utmoſt accuracy, and not without ſome danger; many ancient and modern celebrated buildings, both at Rome and in other parts of Europe; ſtrictly copying ſuch things as appeared to be perfect; and carefully correcting others, which ſeemed in any degree, faulty: relying therein not alone on his own judgment, in doubtful caſes; but much on the opinion and advice, of ſeveral learned, ingenious artiſts of different nations; with whom he had the advantage of being intimately connected, when abroad.

SENSIBLE he is, that the extraordinary degree of accuracy, which has been aimed at in theſe compoſitions, is of little conſequence to the generality of ſpectators; who ſee in the groſs, and feel by the lump. Nevertheleſs, as in poeſy, muſic, painting, and indeed in all arts, there are delicacies, which, though they eſcape the vulgar notice, afford uncommon pleaſure to perſons of enlightened conception; ſo in architecture, this kind of perfection, is the ſource of ſecondary pleaſures; leſs forcible perhaps, but not always leſs delightful than the firſt: theſe may be compared, to thoſe excited by the energy or graces of language in poetry; by the ſhakes, ſwells, inflections, and other artifices of the inſtrument, or voice in muſic; which give ſentiment and expreſſion to the performance. Or in painting, by a judicious choice, and artful diſpoſition of the objects; a nice diſcrimination of the paſſions; an elegant taſte of deſign, and a ſpirited, maſterly touch of the pencil. To all but local colour, and general reſemblance, the unſkilful are commonly blind; but the correct eye, and ripened judgment, derive their chief pleaſure, from that, which the ignorant rarely perceive, and ſeldom or ever taſte.

IT may perhaps, be objected, that the proportions here eſtabliſhed, though proper and good on one occaſion, may on many others be defective. But this objection will, I flatter myſelf, have little weight; when it is remembered, that the ſituation of capitals and entablatures, with reſpect to the order of which they are parts, is conſtantly the ſame: and the points of view more or leſs diſtant, according to the ſize or elevation of the order. And that conſequently, the apparent magnitudes of all their parts, will always have, very nearly, the ſame proportion to each other; even though they ſhould be exalted to a ſecond or third ſtory.

WITH regard to baſes indeed, their being placed on pedeſtals, or immediately on the ground, will occaſion ſome little difference in their appearance; and when they are raiſed to a ſecond ſtory, their figure and apparent proportions will be conſiderably altered. Nevertheleſs it doth not ſeem neceſſary, in either of theſe caſes, to vary their dimenſions: for in the former of the two, the alteration would be trifling; and in the latter, the object being far removed from the eye, the ſpectator will rather be occupied in conſidering the general maſs, than in examining its parts; which, on account of their diſtance, cannot be diſtinctly perceptible.

THE height of the Doric column, including its capital and baſe, is ſixteen modules; and the height of the entablature, four modules; the latter of which being

divided into eight parts, two of them are given to the architrave, three to the frize, and the remaining three to the cornice.

IN moſt of the antiques, the Doric column is executed without a baſe: Vitruvius likewiſe makes it without one; the baſe, according to that author, having been firſt employed in the Ionic order, to imitate the ſandal or covering of a woman's foot. Scamozzi blames this practice; and moſt of the moderns have been of his opinion; the greateſt part of them having employed the Attic baſe in this order. Monſieur De Chambray, however, whoſe blind attachment to the antique is, on many occaſions, ſufficiently evident; argues vehemently againſt this practice: which, as the order is formed upon the model of a ſtrong man, who is conſtantly repreſented bare-footed; is, according to him, very improper: and "though, ſays he, "the cuſtom of employing a baſe, in contempt of all ancient authority, has by "ſome unaccountable and falſe notions of beauty, prevailed; yet I doubt not but "the purer eye, when appriſed of this error, will eaſily be undeceived; and as "what is merely plauſible will, when examined, appear to be falſe; ſo apparent "beauties, when not founded in reaſon, will of courſe be deemed extravagant."

LE CLERC'S remarks on this paſſage, are very judicious; and as they may ſerve to deſtroy a notion, which ſoon after our Athenian diſcoveries, about thirty years ago, was much too prevalent among us; and might, perhaps, in ſome future hour of extravagance, prevail again; I ſhall, for the benefit of ſuch as are unacquainted with the original, tranſlate the whole paſſage. "In the moſt ancient "monuments of this order, ſays he, the columns are without baſes; for which it "is difficult to aſſign any ſatisfactory reaſon. Monſieur De Chambray, in his "parallel, is of the ſame opinion with Vitruvius, and maintains that the Doric "column, being compoſed upon the model of a naked, ſtrong, and muſcular man, "reſembling a Hercules, ſhould have no baſe; pretending that the baſe to a column, "is the ſame as a ſhoe to a man. But I muſt own, I cannot conſider a column "without a baſe, in comparing it to a man; but I am at the ſame time ſtruck with "the idea of a perſon without feet, rather than without ſhoes: for which reaſon I "am inclinable to believe; either, that the architects of antiquity had not yet thought "of employing baſes to their columns, or that they omitted them, in order to leave "the pavement clear; the angles and projection of baſes, being ſtumbling blocks to "paſſengers, and ſo much the more troubleſome, as the architects of thoſe times, "frequently placed their columns very near each other: ſo that had they been "made with baſes, the paſſages between them would have been extremely narrow "and inconvenient: and it was doubtleſs for the ſame reaſon, that Vitruvius made "the plinth of his Tuſcan column round; that order, according to his conſtruction, "being particularly adapted to ſervile and commercial purpoſes; where conveniency "is preferable to beauty. However this be, perſons of good taſte will grant, that "a baſe not only gives a graceful turn to the column, but is likewiſe of real uſe; "ſerving to keep it firm on its plan: and that if columns without baſes are now ſet "aſide, it is a mark of the wiſdom of our architects, rather than an indication of "their being governed by prejudice, as ſome adorers of antiquity would inſinuate."

IN imitation of Palladio, and all the modern architects except Vignola; I have made uſe of the Attic baſe in this order: and it certainly is the moſt beautiful of any; though for variety's ſake, when the Doric and Ionic orders are employed together,

together, the baſe invented by Vignola, of which a profile is annexed, may ſometimes be uſed. Bernini has employed it in the colonades of St. Peter's, and it has been ſucceſsfully applied in many other buildings.

THE ancients ſometimes made the ſhaft of the Doric column priſmatic, as appears by a paſſage in the fourth book of Vitruvius; and at other times they adorned it with a particular kind of ſhallow flutings, deſcribed from the center of a ſquare, no interval or fillet being left between them. Of this ſort, there are now ſome columns to be ſeen in the temples of Peſtum, near Naples; in different parts of Sicily; and in the church of St. Peter in Catenis, at Rome. The firſt of theſe manners has not, I believe, been imitated by any of the modern maſters; nor is the ſecond very frequent: Scamozzi blames it for its want of ſolidity, the projecting angles between the flutings being eaſily broken, and, if the material be ſoft, very ſubject to moulder.

VITRUVIUS gives to the height of the Doric capital one module; and all the moderns, except Alberti, have followed his example. Nevertheleſs, as it is of the ſame kind with the Tuſcan, they ſhould both bear nearly the ſame proportion to the heights of their reſpective columns; and conſequently, the Doric capital ought to be more than one module, which it accordingly is, both at the Coliſeum, and in the theatre of Marcellus: being in the former of theſe buildings, upwards of thirty-eight minutes, and in the latter thirty-three minutes high.

IN the deſign here offered, I have made the height of the whole capital thirty-two minutes, and in the form and dimenſions of the particular members, I have deviated but little, from the profile of the theatre of Marcellus. The frize, or neck, is enriched with huſks and roſes, as in Palladio's deſign, and as it has been executed by Sangallo, at the Farneſe Palace in Rome, and by Cigoli, in the Cortile of the Strozzi at Florence, as well as in ſeveral buildings of note in this metropolis. The projection of theſe huſks and flowers, muſt not exceed that of the upper cincture of the column.

THE architrave is one module in height, and compoſed only of one faſcia and a fillet, as at the theatre of Marcellus: the drops are conical, as they are in all the antiques; not pyramidal, as they are improperly made by moſt of our Engliſh workmen: they are ſuppoſed to repreſent drops of water draining from the triglyph, and conſequently they ſhould be cones, or parts of cones, not pyramids.

THE frize and the cornice, are each of them one module and a half in height: the metope is ſquare, and enriched with a bull's ſcull, adorned with garlands of beads, in imitation of thoſe on the temple of Jupiter Tonans, at the foot of the Capitol. In ſome antique fragments, and in a greater number of modern buildings, the metopes are alternately enriched with theſe ox-ſculls, and with pateras; but they may be filled with any other ornaments, of good forms; and frequently with greater propriety. Thus, in military ſtructures, heads of Meduſa, or of the Furies, thunderbolts, and other ſymbols of horror, may be introduced: likewiſe helmets, daggers, garlands of laurel or oak, and crowns of various kinds; ſuch as thoſe uſed among the Romans, and given as rewards for different military achievements: but ſpears, ſwords, quivers, bows, cuiraſſes, ſhields, and the like; muſt be avoided:

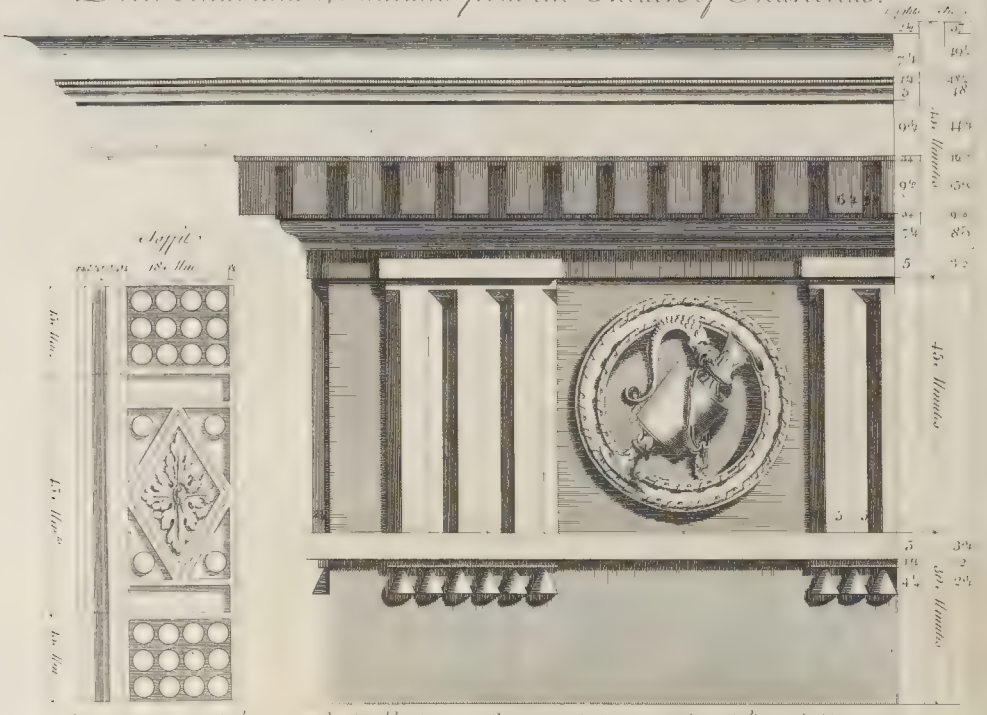
becauſe the real dimenſions of theſe things, are too conſiderable to find admittance in ſuch ſmall compartments: and repreſentations in miniature, always carry with them an idea of triviality, carefully to be avoided in architecture; as in all other arts. In ſacred buildings, cherubs, chalices, and garlands of palm or olive, may be employed; likewiſe doves, or other ſymbols of moral virtues. And in private houſes, creſts or badges of dignity, may ſometimes be ſuffered: though ſeldom; and indeed never, when they are of ſuch ſtiff, inſipid forms, as ſtars, garters, modern crowns, coronets, mitres, truncheons, and ſimilar graceleſs objects: the ill effects of which may be ſeen at the Treaſury, in St. James's Park, and in many other places.

TOO much variety in the ornaments of the metopes, muſt be avoided; leſt the unity of the compoſition ſhould be deſtroyed. It is beſt, never to introduce more than two different repreſentations; which ſhould not conſiſt of above one, or at moſt two objects each; of ſimple forms, and not overcharged with ornaments. In the diſpoſition of theſe, care muſt be taken to place them with ſymmetry; thoſe on the right, in correſpondence with thoſe on the left. Wherefore, when a triglyph happens to be in the middle of a front, it becomes neceſſary to couple the middle ones, by filling the two metopes, on each ſide of the central triglyph, with the ſame ſort of ornaments; as is done at the gate of Burlington Houſe in Piccadilly; diſtributing the reſt alternately, throughout the compoſition, as uſual. It is likewiſe to be obſerved, that ornaments in metopes, are not to project ſo much as they do at Bow Church, or at General Wade's Houſe in Burlington Gardens; where, from their great relief, they are far more ſtriking than the triglyphs; which ought to predominate: as being eſſential, and principal parts in the compoſition. Palladio in his Baſilica of Vicenza, has given to the moſt elevated parts of the ox-ſculls and pateras, with which the metopes are filled; very little more projection, than that of the triglyph; and in this, he has copied the ancients; who ſeldom or never, gave more projection to any ornament, than that of the frame or border, in which it was incloſed: as appears by thoſe inimitable fragments in the Villa Medici, and many others in different parts of Rome, and elſewhere. The channels of the triglyph on their plan, commonly form a right angle; but, to give them more effect, a narrow ſquare groove may be cut in the inner angle, from top to bottom; and quite into the ſolid of the frize.

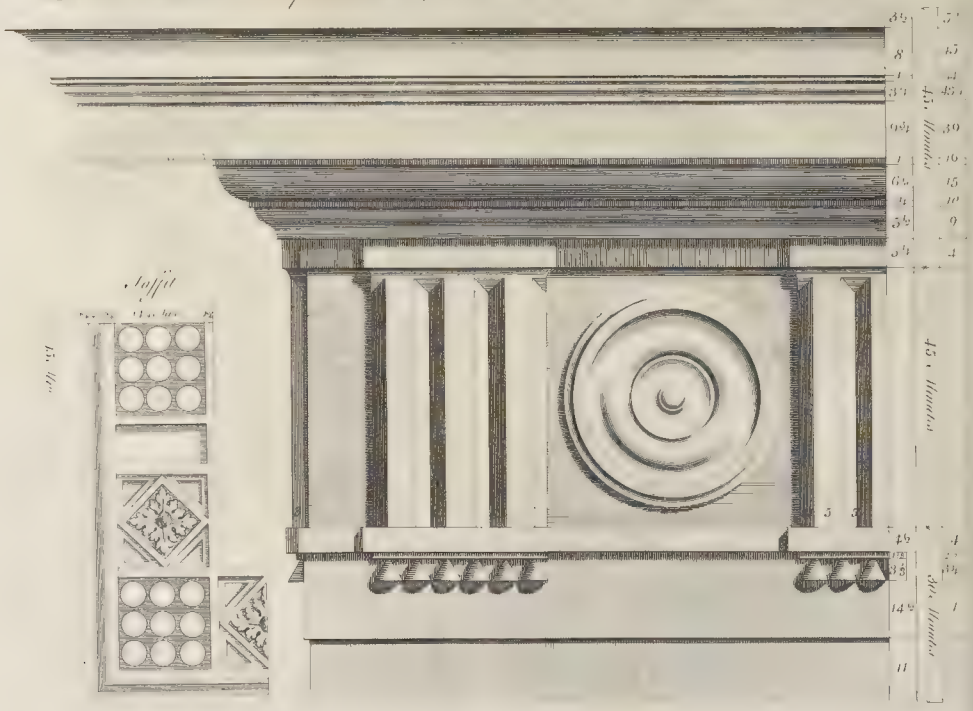
IN the cornice, I have deviated very little from my original. Le Clerc, who in his Doric profile, has imitated that of Vignola; makes the mutules as broad as the capital of the triglyph: Mr. Gibbs has followed his example; and they have been executed in that manner, on a couple of doors to houſes, on the north ſide of Lincoln's-Inn Fields. But Vignola's method is preferable, who makes them no broader than the triglyph; as it is more ſightly, and more conformable to the carpenter's art: in which, the width of the rafter, never exceeds the width of the beam or joiſt, it ſtands upon. The ornaments of the ſoffit, are nearly the ſame as thoſe of Vignola. They ſhould be entirely ſunk up, wrought in the ſolid of the corona, and never drop down lower than its ſoffit. There is no neceſſity for cutting them deep: in moſt of Palladio's buildings, they do not enter above two minutes, into the corona; and that is quite ſufficient.

VIGNOLA'S

Doric Entablature, Imitated from the Theatre of Marcellus.



Doric Entablature of Palladio, as Executed in the Basilica at Vicenza.



VIGNOLA'S other Doric profile, is in imitation of that of the theatre of Marcellus; in it he has very judiciouſly pointed out, and in ſome meaſure, corrected the faults of the original: but reverence for the antique, has made him rather too ſparing of his amendments. I have given a deſign of this profile*, with ſuch farther corrections as appeared neceſſary; the moſt conſiderable of them, conſiſting in the enlargement of the dentils; which are neither in the antique model, nor in Vignola's profile, ſufficiently conſpicuous, to hold their due place in the compoſition.

AT the theatre of Marcellus, the ornaments of the ſoffit are not in a horizontal poſition, but hang down towards the front of the corona; which, as it appears by Vitruvius, was a common practice among the ancients; and done to imitate the inclination of the rafters. Palladio, and Vignola, have both adopted this particularity; which, Davilere ſuppoſes to have been firſt uſed, in order to make the projection of the entablature, appear more conſiderable. To me it has an exceeding diſagreeable appearance; the whole ſoffit ſeems in a falling ſtate: and ſo far is it from producing the effect which Davilere ſuppoſes, that it actually makes, as it evidently muſt, the projection ſeem leſs than in reality it is.

VIGNOLA'S two Doric entablatures, ſays Davilere, are both of them ſo elegantly compoſed, that it is ſcarcely poſſible to determine, which of them ought to have the preference. The firſt, which is entirely antique, is the lighteſt; and conſequently propereſt for interior decorations, or objects intended for near inſpection; the other, compoſed by Vignola himſelf, from various fragments of antiquity, being bolder, and conſiſting of larger parts, ſeems better calculated for outſide works; and places where the point of view is either diſtant, or unlimited. On polygonal plans, however, the mutule cornice muſt be avoided; becauſe the ſoffits of the angular mutules, would form irregular and very diſagreeable figures: neither ſhould it be employed in concaves of ſmall dimenſions, for the ſame reaſon; nor in places where frequent breaks are requiſite; it being extremely difficult, often impoſſible, to prevent the mutules from penetrating, and mutilating each other, in various unſightly manners. And wherever this cornice is uſed on a convex ſurface, the ſides of the mutules muſt be made parallel; for it would be both diſagreeable and unnatural, to ſee them broader, and conſequently heavier in front, than where they ſpring out of the mutule band.

PALLADIO'S Doric entablature, is likewiſe very beautiful: I mean as it is executed in the Baſilica of Vicenza, where it differs widely from the profile in his book†, and is far preferable thereto. In the ſame plate with Vignola's dentil entablature, there is a deſign of it, accurately copied from that building; which may ſerve as one inſtance of many, to ſhew, how little the meaſures of his book are to be relied upon.

OF all the entablatures, the Doric is moſt difficult to diſtribute; on account of the large intervals, between the centers of the triglyphs; which neither admit of increaſe, or diminution, without injuring the ſymmetry, and regular beauty of

* Pl Doric Entablatures. † Pl. Doric Entablatures.

the compoſition. Theſe conſtantly confine the compoſer to intercolumniations, diviſible by two modules and a half; entirely exclude coupled columns; and produce ſpaces, which, in general, are either too wide or too narrow, for his purpoſes.

TO obviate theſe difficulties, the triglyphs have often been omitted, and the entablature made plain; as at the Coliſeum in Rome, the colonades of St. Peter's, of the Vatican; and in many other buildings, both at home and abroad. This indeed, is an eaſy expedient: but while it robs the order of its principal characteriſtick diſtinction, leaves it poor, and very little ſuperior to the Tuſcan, the remedy ſeems deſperate, and ſhould never be employed, but as a laſt reſource.

THE ancients employed the Doric, in temples dedicated to Minerva, to Mars, and to Hercules; whoſe grave and manly diſpoſitions, ſuited well with the character of this order. Serlio, ſays it is proper for churches dedicated to Jeſus Chriſt, to St. Paul, St. Peter; or any other Saints, remarkable for their fortitude, in expoſing their lives, and ſuffering for the Chriſtian faith. Le Clerc, recommends the uſe of it, in all kinds of military buildings; as arſenals, gates of fortified places, guard rooms, and ſimilar ſtructures. It may likewiſe be employed in the houſes of generals or other martial men; in mauſoleums erected to their memory, or in triumphal bridges and arches, built to celebrate their victories.

I HAVE made the height of the Doric column, ſixteen modules; which, in buildings where majeſty, or grandeur are required, is a proper proportion: but in others, it may be ſomewhat more ſlender. Thus, Vitruvius makes the Doric column in porticos, higher by half a diameter, than in temples; and moſt of the modern architects, have on ſome occaſions, followed his example. In private houſes therefore, it may be $16\frac{1}{3}$, $16\frac{1}{2}$, or $16\frac{2}{3}$ modules high; in interior decorations, even ſeventeen modules, and ſometimes perhaps a trifle more: which increaſe in the height, may be added entirely to the ſhaft, as in the Tuſcan order; without changing either the baſe, or capital. The entablature too, may remain unaltered, in all the aforeſaid caſes; for it will be ſufficiently bold, without alteration.

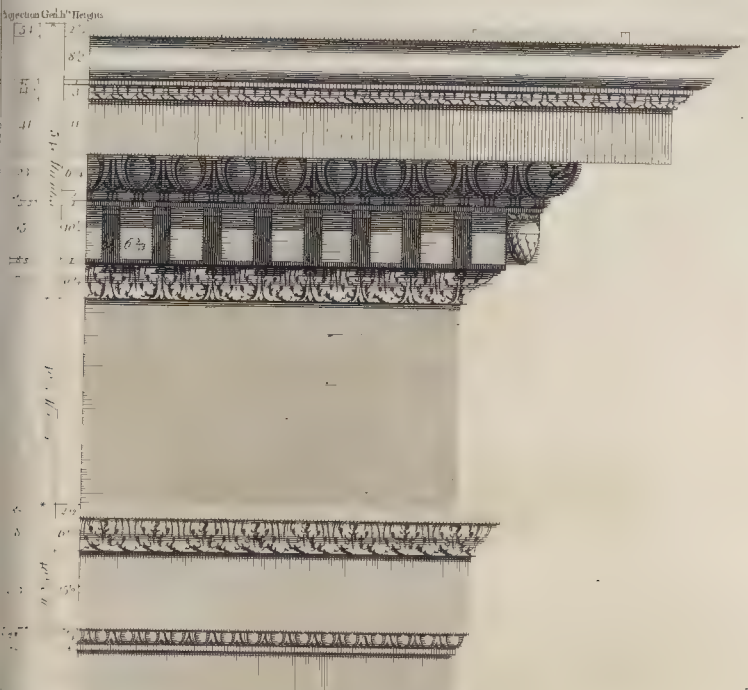
Of the IONIC ORDER.

AMONGST the ancients, the form of the Ionic profile, appears to have been more poſitively determined, than that of any other order; for in all the antiques at Rome, (the temple of Concord excepted,) it is exactly the ſame; and conformable to the deſcription Vitruvius has given thereof.

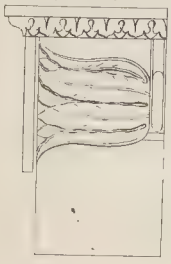
THE modern artiſts, have likewiſe been more unanimous in their opinions upon the ſubject; all of them, excepting Palladio and his imitators, having employed the dentil cornice, and the other parts of the profile, nearly as they are found in the Coliſeum, the temple of Fortune, and the theatre of Marcellus.

IN Palladio's works, we meet with three different Ionic entablatures; all of them very beautiful. The firſt is the true antique, which he has made uſe of at the palace

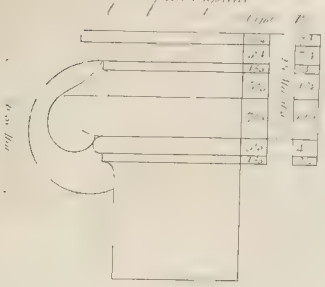
THE IONIC ORDER.

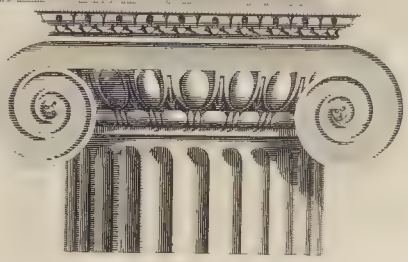


Side of the Capital



Profile of the Capital





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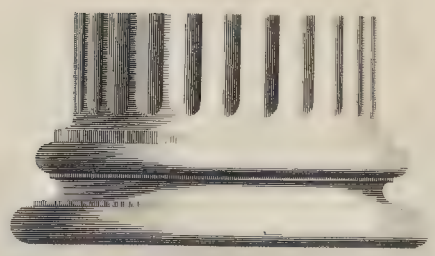
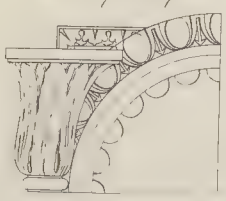
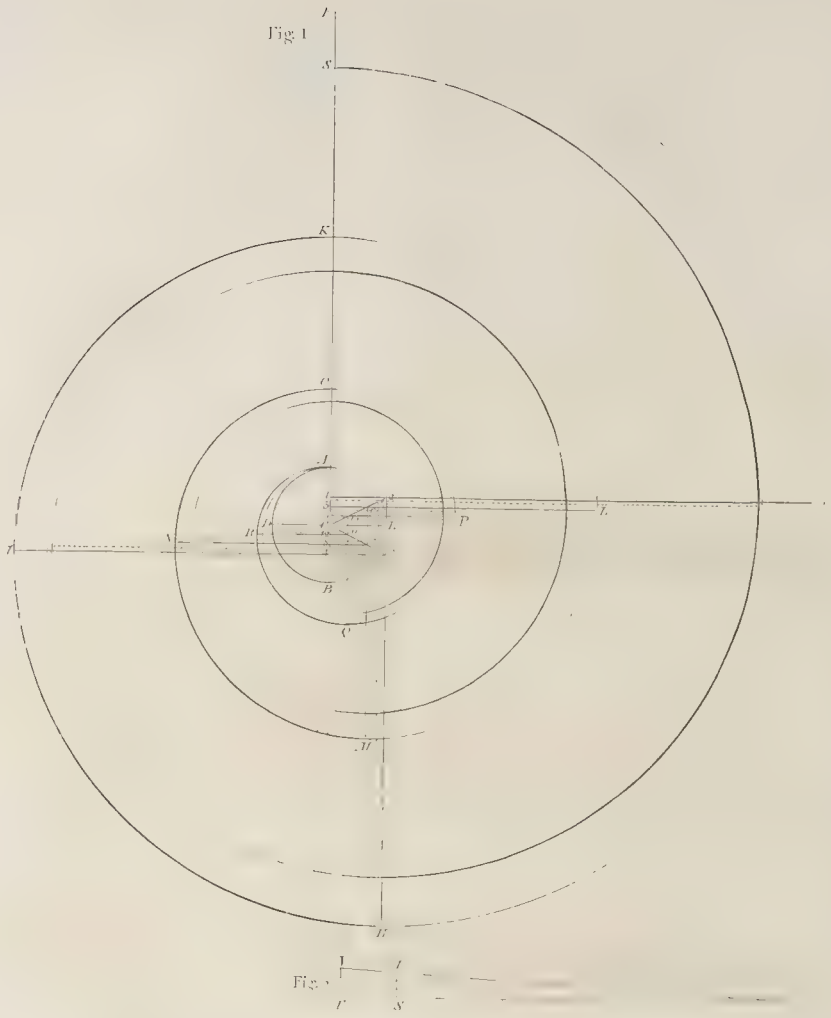
60. Minutes



Plan of the Capital





Goldman's Volute Described.

Fig. 1. *Draw the Cathetus F C whose length must be half a Module, and from the point C describe the Eye of the Volute A E B D, of which the Diameter is to be 3⅓ minutes, divide it into four equal Sectors by the Diameters A B, D E, Bisect the Radius C A, C B in 1 and 4, and on the line 1. 4 Construct a Square 1.2.3.4. from the Centre C to the Angles 2.3 draw the Diagonals C. 2 C.3, and divide the side of the Square 1,4 into Six equal parts at 5.9.C 12.8. then through the points 5. 9. 12. 8 draw the lines 5.6. 9.10. 12.11. 8.7. parallel to the Diameter E D which will cut the Diagonals in 6 7 10 11. and if points 1. 2. 1.5.6.7.8.9.10.11.12 will be the Centres of the Volute. From the first Centre 1 with the Interval 1.F. describe the Quadrant F 6, from the second Centre 2 with the Interval 2 6 describe the Quadrant 6 H, and continuing the same operation from all the twelve Centres, the Contour of the Volute will be Completed.*

The Centres for describing the fillet are found in this manner. Construct a Triangle of which the side A F is equal to the part of the Cathetus contained between A E, and the side F V equal to C 1, on the side A F place the distance F S from V towards A, equal to F S the breadth of the fillet, and through the point S draw the line S T, which will be to C 1 in the same proportion as A S is to A E, place this line on each side of the Centre C on the Diameter of the Eye A B, divide it into equal parts, and through the points of division draw lines parallel to the Diameter E D, which will cut the Radius C 2, C 3, and you will have twelve new Centres, from whence the interior Contour of the fillet may be described in the same manner as the exterior one was from the first Centres.

palace of the Porti; and in ſeveral doors and windows, of the Thieni, and Valmarano palaces, in Vicenza. The ſecond, is a very judicious imitation of the entablature in the temple of Concord; and is executed by him, in the upper arcade of the Baſilica, in the ſame city. The third, which is an invention of his own; being the ſame with that in his book; he has employed with ſome ſmall difference, at the Chiericato palace, at the rotunda of Marcheſe Capra, and in various others of his buildings in the Vicentine, or at Venice.

IN the firſt plate of the Ionic order, there is a deſign of the antique profile, collected by me, from different antiquities at Rome. The height of the column is eighteen modules, and that of the entablature, four modules and a half; or one quarter of the height of the column, as in the other orders: which is a trifle leſs, than in any of the regular antique Ionics. The baſe is Attic, as in all the antiques; and the ſhaft of the column may either be plain, or fluted, with twenty-four, or with twenty flutings only, as at the temple of Fortune: of which, the plan ſhould be a little more than ſemi-circular, as it is at the temple of Jupiter Tonans, and at the forum of Nerva; becauſe then they are more diſtinctly marked. The fillet, or interval between the flutes, ſhould not be broader than one third of their width; nor narrower than one quarter thereof. The ornaments of the capital, are to correſpond with the flutes of the ſhaft; and there muſt be an ove or a dart, above the middle of each flute. The volutes are to be traced according to Goldman's method, which is the beſt. I have given a deſign of it, with an exact deſcription upon the plate. Perrault prefers De l'Orme's method of deſcribing it; yet certainly, it is not ſo perfect: for in Goldman's, the circular portions that compoſe the volute, have their radii, at their junction, in the ſame ſtraight line; ſo that they meet, without forming an angle: whereas, in that of De l'Orme, the radii never coincide; and conſequently no two of the curves can join, without forming an angle. The ſpace, in De l'Orme's volute, between the firſt quadrants, in the firſt and ſecond revolution, is of the ſame breadth throughout; both the quadrants being deſcribed from the ſame center: but in Goldman's, the ſpace between the revolutions, diminiſhes regularly from the very firſt. Moreover, De l'Orme has given no directions for deſcribing the inner ſpiral, which determines the breadth of the fillet; and which, in his deſign, is nearly of the ſame breadth from firſt to laſt; but Goldman has taught the manner of deſcribing it, ſo as to diminiſh gradually, with the ſame accuracy as the outward ſpiral.

PALLADIO'S volute, differing but little from that of De l'Orme, has nearly the ſame defects: and though Mr. Gibbs has in ſome meaſure, amended it, yet, his likewiſe, is faulty in the breadth of the fillet; which is equal through the greateſt part of the firſt revolution.

VIGNOLA and Scamozzi, Serlio, Alberti, and others have, in their architraves, imitated thoſe of the theatre of Marcellus, and of the Coliſeum; having compoſed them of three faſcias, diſtinguiſhed from each other, only by ſmall projections. This, has but an indifferent effect; the ſeparations ſo faintly marked, are not ſufficiently ſtriking; and the architrave is left too deſtitute of ornaments, for the reſt of the profile: a defect moſt ſtriking, whenever the mouldings of the profile are enriched.

ON the other hand, Palladio's and De l'Orme's architraves, appear too rich; being likewiſe compoſed of three faſcias, ſeparated by mouldings: I have therefore in this particular, choſen to imitate the profile of the temple of Antoninus and Fauſtina; where there are only two faſcias, ſeparated from each other by a moulding.

THE three parts of the entablature, bear the ſame proportion to each other in this, as in the Tuſcan order: the frize is plain, as being moſt ſuitable to the ſimplicity of the reſt of the compoſition; and the cornice is almoſt an exact copy from Vignola's deſign, in which there is a purity of form, a grandeur of ſtile, and cloſe conformity to the moſt approved antiques, not to be found in the profiles of his competitors.

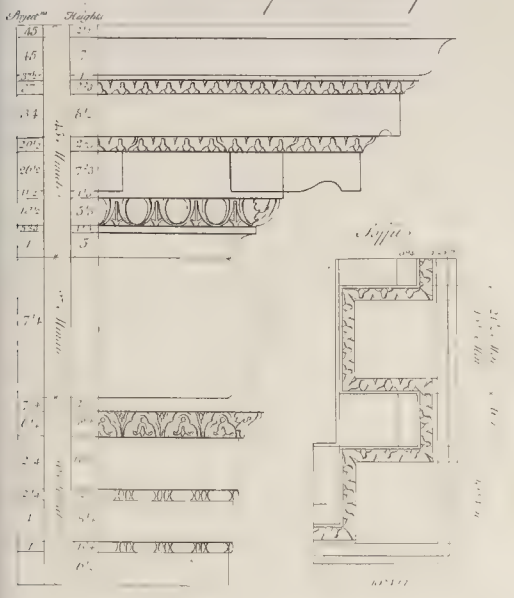
IF it be required to reduce this entablature, to two ninths of the height of the column, (which, on moſt occaſions, is a proportion preferable to that of one quarter; particularly, where the eye has been habituated to contemplate diminutive objects), it may eaſily be done; by making the module for the entablature, leſs by one ninth, than the ſemi-diameter of the column; afterwards dividing it as uſual, and obſerving the ſame dimenſions as are figured in the deſign. The diſtribution of the dentil band will, in ſuch caſe, anſwer pretty nearly in all the regular intercolumniations; and in the outer angle, there will be a dentil, as there is in the temple of Fortune, at Rome.

IN interior decorations, where much delicacy is required, the height of the entablature may be reduced even to one fifth of the column; by obſerving the ſame method, and making the module, only four fifths of the ſemi-diameter.

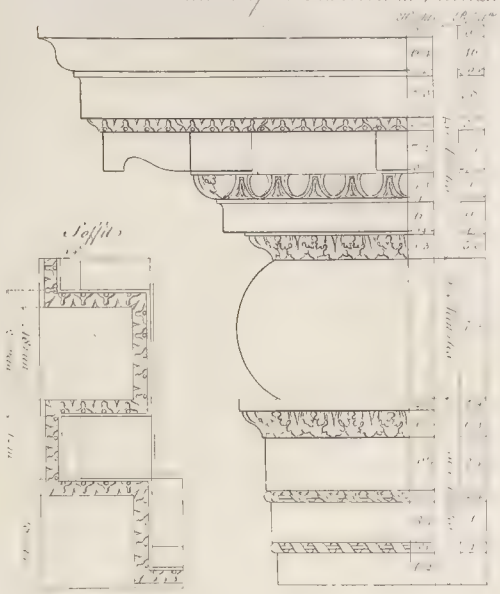
OF Palladio's profiles, that, imitated from the temple of Concord, appears to me the beſt: it's height is equal to one fifth of the height of the column. The deſign which I have given of it, is cloſely copied from the Baſilica, at Vicenza: but it will be more perfect, if the frize be made flat, and it's height augmented, ſo as to equal that of the architrave; by which means, the proportion of the entablature to the column, will be better: for the relation of one to five, is, generally ſpeaking, too ſmall. In the cornice it will likewiſe be well to add, between the corona and fillet, under the cyma, an oge; of the ſame dimenſion, with that over the modillions. Thus, all the parts will be equally rich, and the upper cyma be better ſupported. This, Scamozzi has done in his profile: though in other reſpects, his Ionic entablature may be conſidered as a copy, from Palladio: the fillet, being thus ſuſtained by the oge, may be diminiſhed a trifle.

PALLADIO'S other profile, I have copied from the rotunda of Capra; it's height is likewiſe one fifth of the column. The frize, as in the former deſign, is low and ſwelled: but it will be better to raiſe it to the ſame height with the architrave, and keep it upright as before directed; for the ſwell gives it a clumſy form, and appearing a continuity of the ſame undulations, which compoſe the architrave and cornice; ſerves to render the outline of the whole entablature confuſed, and much too abundant in curves. The frize, when ſo formed, conveys the idea of a piece of timber, uſed without being hewn; as was the practice of ruder times

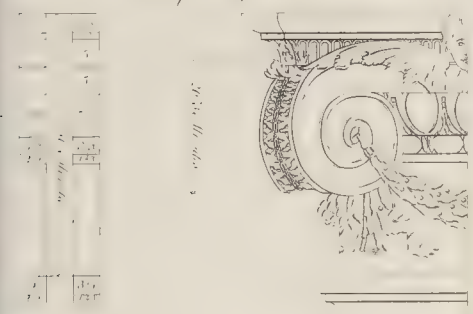
Ionic Entablature of the Villa Capra



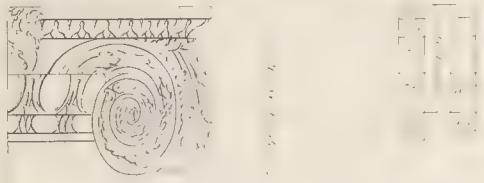
Ionic Entablature of the Basilica at Vicenza



Plan & Elevation of an Capital in the Roman Style



Plan & Elevation of an Ancient Capital



times among the Greeks, and cannot with propriety be introduced in a finiſhed work.

IN the antique, there are few examples of theſe ſwelled frizes; Palladio probably took his hint, from the temple of Bacchus, near Rome; where the ſwelled frize has been uſed in a Compoſite order: or perhaps, from the Baſilica of Antoninus, where it has been employed in a Corinthian: with little ſucceſs at the laſt, and with much leſs, at the firſt of theſe places; for as the columns are there inſulated, and the profile is marked at the four angles, the deformity becomes ſo much the more conſpicuous: and, notwithſtanding Palladio's partiality to this form of frize, which ſo frequently recurs in moſt of his works; it ſeldom or never can be introduced with ſucceſs, but on doors or windows, where the profile of the architrave is not marked under it: there indeed, the ſwell forms a good contraſt with the upright jambs; and has the farther advantage of contracting the ſpread of the cornice; which, in narrow intercolumniations, is very convenient; and in moſt caſes, may prevent the licentious practice, of making the frize and cornice no wider than the aperture of the door or window, and ſupporting them on each ſide with a ſort of ſcroll; as at the Sorbonne in Paris, and at the Manſion Houſe in this city.

PALLADIO, in both theſe profiles, has enriched the ſoffit of the corona with roſes; which are here omitted, as in moſt caſes they ought to be. However when the column is fluted, and the reſt of the compoſition much adorned, they may, and ſhould be introduced; care being taken to proportion the pannels, and other parts ſurrounding them, in the ſame manner, as if the order were Corinthian or Compoſite.

THE antique Ionic capital, differs from any of the others: its front and ſide faces are not alike. This particularity, occaſions great difficulty, wherever there are breaks in the entablature; or where the decoration is continued in flank, as well as in front: for either, all the capitals in the flank muſt have the baluſter ſide outward, or the angular capitals will have a different appearance from the reſt; neither of which is admiſſible. The architect of the temple of Fortune at Rome, has fallen upon an expedient, which in ſome degree, remedies the defect. In that building, the corner capitals have their angular volutes in an oblique poſition, inclining equally to the front and ſide, and offering volute faces both ways. Wherever perſons are violently attached to the antique, or furiouſly bent on rejecting all modern inventions, however excellent; this is the only mean to gratify them: but when ſuch is not the caſe, the angular capital invented by Scamozzi, or imitated and improved by him, from the temple of Concord, or borrowed from ſome modern compoſitions extant in his time, ought to be employed; for the diſtorted figure of the antique capital, with one volute ſtraight and the other twiſted, is very perceptible, and far from being pleaſing to the eye.

ANNEXED is a deſign of Scamozzi's capital, and another of a very beautiful one, executed in St. Peter's of the Vatican; probably compoſed by Michael Angelo. Similar capitals may alſo be ſeen in the church of the Roman college, and in various other buildings at Rome.

IN this order, I have employed the Attic baſe. Of the antique baſe deſcribed by Vitruvius, and uſed by Vignola and Philibert De l'Orme, in their Ionic orders, and by Sir Chriſtopher Wren, in ſome parts of St. Paul's; I think there is no example among the antiques; and being univerſally eſteemed a very imperfect production, I have not even given a deſign of it.

AS the Doric order, is particularly affected in churches or temples, dedicated to male ſaints; ſo the Ionic, is principally uſed in ſuch as are conſecrated to females, of the matronal ſtate. It is likewiſe employed in courts of juſtice, in libraries, colleges, ſeminaries, and other ſtructures having relation to arts or letters; in private houſes, and in palaces; to adorn the women's apartments; and, ſays Le Clerc, in all places dedicated to peace and tranquillity. The ancients employed it in temples ſacred to Juno, to Bacchus, to Diana, and other deities whoſe diſpoſitions held a medium, between the ſevere and the effeminate.

Of the COMPOSITE ORDER.

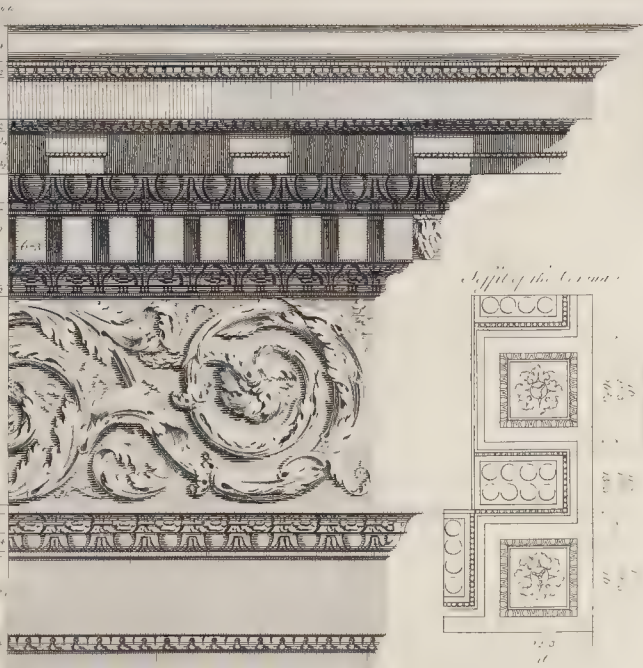
STRICTLY ſpeaking, the ancients had but four orders; the Compoſite was not conſidered by them as a diſtinct production: Vitruvius expreſsly tells us, book IV. chap. 1, that on Corinthian columns, other capitals of various kinds were employed; which nevertheleſs ought not to change the names of the columns, becauſe their proportions remained ſtill the ſame.

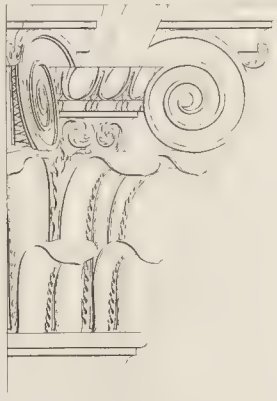
THE moderns, however, have ranked the Compoſite with the four orders mentioned by Vitruvius; having among the great number of different Compoſite capitals, to be met with in the remains of antiquity, choſen for their model, that which has been uſed in the triumphal arches, in the temple of Bacchus, and at the baths of Dioclefian: rather, I believe, as agreeing moſt with the deſcription of Vitruvius, (who obſerves that theſe capitals were compoſed of the Ionic, Doric, and Corinthian,) than from any preference in point of beauty to many others.

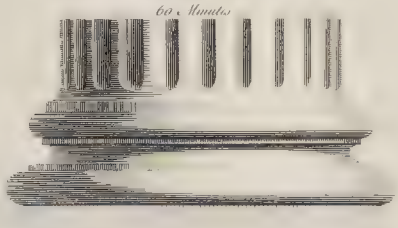
NEITHER doth it appear, that the ancients affected any particular form of entablature to this order: ſometimes they made the cornice entirely plain, as in the temple of Bacchus; at others, enriched with dentils, and differing very little from the Ionic, as in the arch of Septimus Severus; and in the arch of Titus, there are both dentils and modillions; the whole form of the profile, being the ſame with that of the Corinthian; as it is executed in moſt of the antiques, at Rome and elſewhere.

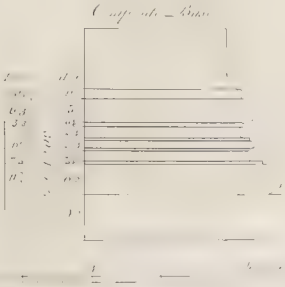
THE modern architects, have varied more in this, than in any other of the orders. Abandoned, as De Chambray obſerves, by their guide Vitruvius; and left entirely at large, they have all taken different paths: each following the bent of his own particular fancy. Among them, Serlio has been leaſt ſucceſsful; having choſen for the model of his entablature, that of the fourth order of the Coliſeum: a compoſition

THE ROMAN OR COMPOSITE ORDER.









compoſition too clumſy, even for a Tuſcan order. De l'Orme, however, has followed his example; and miſtaken the columns of the fourth order of the Coliſeum, which are Corinthian, for Compoſite.

PALLADIO in his profile, has imitated the cornice of the frontiſpiece of Nero; and corrected its defects with much judgment. His architrave is likewiſe taken from the ſame building: but he has omitted its beautiful frize, and ſubſtituted in its place a ſwelled one, ſimilar to that of the Baſilica of Antoninus. His whole entablature is too low; being only one fifth of the column: and it is remarkable, that, though he has made the column more delicate, than in the Corinthian order, yet his entablature is made far more maſſive; being compoſed of fewer and much larger parts. In the deſign given on the ſecond plate of the Compoſite order, Palladio's meaſures have been cloſely obſerved: but if the frize were augmented, ſo as to raiſe the entablature to two ninths of the column; made upright, and enriched with ornaments; it would be more perfect: and might be employed with ſucceſs, in works of large dimenſions, which require to be ſeen from a conſiderable diſtance. But for interior decorations, or in places where much delicacy is required; the compoſition is ſomewhat too maſſive.

PALLADIO'S capital and baſe, are imitations from the arch of Titus. The latter of them is deſigned without a plinth, as it is executed in the temple of Veſta, at Tivoli; and joined to the cornice of the pedeſtal, by a ſlope: which not only has a bad effect, but is in itſelf defective; becauſe the baſe is thus diveſted of its principal member, and rendered diſproportionate.

VIGNOLA'S Compoſite, has nothing in it remarkable. The architrave differs but little, from that of the frontiſpiece of Nero; and the cornice is nearly the ſame, with that of his Ionic order: the principal difference conſiſting in the tranſpoſition of ſome mouldings, and enlargement of the dentils; both which ſeem rather alterations for the worſe, than improvements.

SCAMOZZI'S entablature being like Palladio's, only one fifth of the column, and much divided, has a trifling appearance: the cornice however is, upon the whole, well compoſed; and in a great meaſure, imitated from that of the third order of the Coliſeum; the capital is much like Palladio's, and the baſe is Attic enriched with aſtragals, as at the Baſilica of Antoninus.

THE deſign which I have given in the firſt plate of the Compoſite order, is an invention of my own; in which I have attempted to avoid the faults, and unite the perfections, of thoſe abovementioned: how far with ſucceſs, is left to the reader's determination: and at any rate, recourſe may ſtill be had to Palladio, Scamozzi, or Vignola, as heretofore. The height of the column is twenty modules, that of the entablature, five: the baſe is Attic, and its meaſures are the ſame, as in the Doric or Ionic orders; but as the module is leſs, all its parts are of courſe proportionably more delicate. The ſhaft is enriched with flutings, which may either be to the number of twenty, or of twenty-four, as on the Ionic column: for there is no reaſon why in different orders, their number ſhould either be augmented or diminiſhed; the module being leſs, the flutes will likewiſe be leſs, and correſpond exactly with the character of the reſt of the compoſition.

THE capital is of the kind, which all the moderns have employed in this order; being enriched with leaves of the acanthus, as all the antique capitals of this ſort are. With regard to the method of tracing it, few directions will ſuffice: for the deſigns are exactly drawn and figured. The curvatures of the abacus, are deſcribed from the ſummits of equilateral triangles: the projection of the volutes, is determined by a line drawn from the extremity of the aſtragal, to the extremity of a horn of the abacus; and the projection of the leaves, is determined by another line drawn parallel to that; from the fillet under the aſtragal.

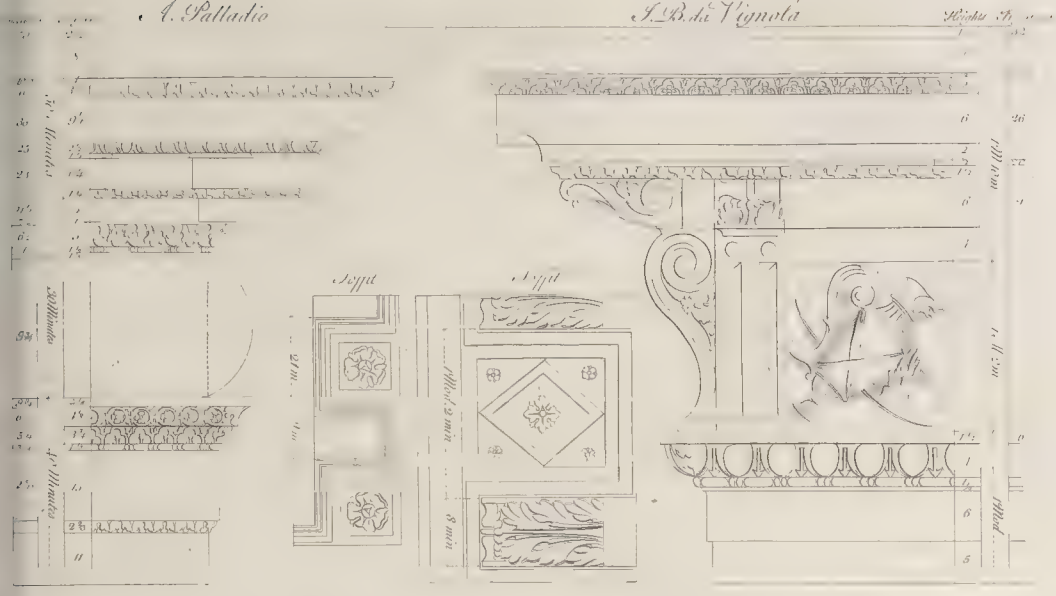
THE manner of executing both theſe, and all other enriched capitals in this city, is generally ſpeaking, bad. I do not, however, mean to accuſe our Engliſh workmen of incapacity, many of them are excellent; and in neatneſs of execution, out-do, perhaps, thoſe of any other country: but, ſometimes from the parſimony of their employers, and in ſome degree perhaps, for want of thorough ſkill and facility in deſign, their performances are often inſipid, without intention or effect, and by no means expreſſive, either of the taſte or intelligence of the performer.

MANY, even of our greateſt architects, have too much neglected the detail; having employed their attention wholly, on the general diſpoſition of their compoſitions. This neglect, though authoriſed by great examples, ought by no means to be imitated: it is the buſineſs of the architect, to attend to the minuteſt objects, as well as to the moſt conſiderable. If the entire execution of the fabrick be left to his direction, the faults that are committed, will of courſe be ſtated to his account: and therefore it will be prudent in him to ſelect the ableſt workmen, and to furniſh them with proper models, and preciſe inſtructions; in which he will ſhew the extent of his capacity, and diſtinguiſh himſelf from the common herd of thoſe, who, without due qualifications, aſſume the title of architects. The moſt maſterly diſpoſition, incorrectly executed, can only be conſidered as a ſketch in painting; or as an excellent piece of muſic, miſerably murdered by village fidlers, equally deſtitute of taſte and powers of execution.

CARE muſt be taken in Compoſite, as well as in Corinthian capitals, that the feet of the lower leaves, do not project beyond the upper part of the ſhaft of the column, as at St. Carlo in the Corſo at Rome, and at the Banqueting-Houſe in London; for nothing can be uglier: neither are theſe leaves as they mount, to bend forwards, as in many of the antiques, and in ſome modern buildings; becauſe they then hide a conſiderable part of the upper row of leaves, and give a ſtunted, diſagreeable form, to the whole capital. The different diviſions of the acanthus leaf, and bunches of olive or parſley, which compoſe the total of each leaf; muſt be firmly marked, and maſſed in a very diſtinct manner: the ſtems that ſpring from between the upper leaves, are to be kept low upon the vaſe of the capital, while riſing between the leaves; then ſpring gradually forwards, to form the different volutes: and the ornaments, which ſometimes are uſed to adorn the ſides of the angular volutes; are never to project beyond the fillets, between which they are confined. Theſe are all the directions that well can be given in writing; but thoſe who would excel in ornamental works of this kind, or any other; muſt conſult the foliages and flowers of nature; the buildings, ancient or modern, in which they have been executed with care and judgment. The Ionic, Compoſite, and Corinthian

Composite Entablatures & Capitals

A. Palladio — J. B. da Vignola



Flora

Mars

Apollo

French Order

Venus

Jupiter

inthian capitals, to be ſeen in various parts of Somerſet Place; were copied from models, executed under my direction at Rome; and imitated, both in point of forms and manner of workmanſhip, from the choiceſt antique originals. They may ſerve as guides to ſuch, as have had no opportunity of examining the buildings, from which theſe models were collected.

THE parts of the entablature, bear the ſame proportion to each other, as in the Ionic and Tuſcan orders. The architrave is nearly of the ſame form with thoſe of Palladio and Vignola, and that of the Baſilica of Antoninus. The frize is enriched with foliages, in imitation of thoſe on the frize of Nero's frontiſpiece; of which the moſt prominent parts, ſhould never project more than doth the uppermoſt moulding of the architrave under them.

THE cornice is imitated from Scamozzi, and differs from the Corinthian, only in the modillions; which are ſquare, and compoſed of two faſcias. The ſoffit of the intervals between the dentils, muſt be hollowed upwards behind the little fillet in front, as they are in moſt of the antiques; which occaſions a dark ſhade, that marks the dentil more diſtinctly. And the ſame method muſt be obſerved in the Ionic and Corinthian orders, for the ſame reaſon. The roſes, in the ſoffit of the corona, are not to project beyond its horizontal ſurface; and care muſt be taken not to vary them ſo much as at St. Peter's of the Vatican, becauſe the unity of the compoſition ſuffers thereby: the modillions or dentils, might with almoſt as much propriety be varied. It will be proper therefore, in ſmall compoſitions, to make them all alike, as they are in moſt of the antiques; that ſo, they may not ſtrike, nor occupy the attention of the beholder as objects for diſtinct contemplation, but as parts, of one great whole. In larger compoſitions, they may be of two kinds, but ſimilar in out-line and dimenſion; which occaſions more variety, yet without confuſion: for then, the images ſucceed each other ſo rapidly, and are from their ſimilitude, ſo inſtantaneouſly comprehended; that the third impreſſion takes place, before the firſt is in any degree obliterated: ſo that nearly the ſame effect is produced, as by a continued ſucceſſion of the ſame object.

BUT though this variety be practiſed, and is to a certain degree, allowable in ſmall objects, which the eye peruſes at a glance; or in ſuch, as being merely acceſſory, may or may not be introduced, and do not affect the general out-line, or bent of the compoſition; yet, it is by no means to be tolerated in columns, and other principal or eſſential parts; which, from the number of their conſtituent points, are not conveyed to the mind at once, either with eaſe or perfect clearneſs; and therefore, if varied, cannot fail of exciting confuſed ideas.

IN the fourth book of Palladio, we find, among other ancient temples, one, of which the portico conſiſts of four Corinthian columns, and two pilaſters. The pilaſters are fluted in a perpendicular direction; two of the columns are fluted ſpirally; and the other two have the ſhafts covered with laurel leaves: a variety, abſurd as unpleaſing; which totally deſtroys the general effect of the compoſition, and conveys no idea, but that of a ſtructure made up of diſcordant fragments, as they happened to come in the builder's way.

THE Romans uſed the Compoſite order, more frequently in their triumphal arches, than in any other buildings; meaning, as Serlio ſuppoſes, to expreſs their dominion over thoſe nations, that invented the orders of which this is compoſed. It may, ſays Le Clerc, be uſed with propriety, wherever elegance and magnificence are to be united; but it is more particularly adapted to buildings, deſigned to commemorate ſignal events, or celebrate the virtues and atchievements of conquerors, and legiſlators: becauſe the capitals, and other ornaments may be compoſed of emblems, and of alluſive repreſentations; agreeable to the cuſtom of the ancients: as appears, by very many fragments of capitals, and other members of architecture, ſcattered about, in different parts of Rome, and elſewhere. Some of theſe, are repreſented in the ſecond plate of the Compoſite order; and more may be found in the works of Montano, Le Clerc, Piraneſi, and others, of whoſe works the reader will find a catalogue, in the *ABECEDARIO pittorico*.

THE Compoſite entablature may be reduced to two ninths of the column, (which to avoid fractions, I ſhall call four modules and a half,) by making the module only nine tenths of the ſemi-diameter, and obſerving the ſame meaſures, as are figured in the deſign; and there then will be a dentil in the outward angle, as in the Ionic order. It may likewiſe, if required, be reduced to one fifth, by making the module four fifths of the ſemi-diameter. Though, in caſes where it may be neceſſary to diminiſh ſo much, it will always be better to employ the Ionic cornice: which, being compoſed of fewer parts, will ſtill retain an air of grandeur, notwithſtanding the ſmallneſs of the general maſs.

MOST authors give to the Compoſite order the laſt place, as being laſt invented, and a compound; which of courſe, ought to be preceded by all the ſimples. I have however followed Scamozzi's arrangement; his appearing to me, the moſt natural: for his orders ſucceed each other, according to their degree of ſtrength, and in the progreſſion, that muſt abſolutely be obſerved, whenever they are to be employed together.

Of the CORINTHIAN ORDER.

THE three columns in the Campo Vaccino, ſuppoſed remains of the temple of Jupiter Stator; are generally allowed to be, the moſt perfect models of the Corinthian order amongſt the antiques at Rome. Palladio in his fourth book, where he gives the whole profile at large; acknowledges that he never had ſeen any work better executed, or more delicately finiſhed; that its parts are beautifully formed, well proportioned, and ſkilfully combined; all which laſt qualities, are certainly ſignified, by his *Beniſſimo Inteſi*.

WITH theſe favorable ſentiments, it is extraordinary, that in his deſign of the Corinthian order, he ſhould ſo very conſiderably deviate from this excellent original, as ſcarcely to leave the ſmalleſt ſhadow of reſemblance.

VIGNOLA,

VIGNOLA, in his Corinthian profile, has chiefly imitated the abovementioned fragment, and the interior order of the Pantheon, another very perfect model. His compoſition is uncommonly beautiful, and without diſpute, ſuperior to that of any other maſter: he, having artfully collected all the perfections of his originals, and formed a whole, far preferable to either of them.

THE deſign which I have given, differs but little from that of Vignola. The column is twenty modules high, and the entablature five; which proportions, are a medium between thoſe of the Pantheon, and of the three columns. The baſe of the column, may be either Attic or Corinthian: both are beautiful. Palladio and Scamozzi have employed the Attic baſe enriched with aſtragals; but ſo frequent a repetition of the ſame ſemi-circular forms in junction, has a very indifferent effect; as may be obſerved at the church of St. Martin in the Fields, at the Bank, and in various other buildings of this city: in which, the profiles and forms of Palladio, good, bad, or indifferent, have indiſcriminately been employed.

IF the entablature be enriched, the ſhaft of the column ſhould be fluted; provided it be not compoſed of variegated marble: for a diverſity of colours renders even ſmooth ſurfaces confuſed, and ornaments of ſculpture only ſerve to make the confuſion greater. The flutings may be filled to one third of their height, with cablings, as on the inſide order of the Pantheon; which ſtrengthen the lower part of the column, and make it leſs liable to damage. But when the columns are not within reach, nor ſubject to be hurt by paſſengers, the cables are better omitted: as the general hue of the ſhaft will then be the ſame throughout, and ſeem of a piece; which, when a part of the flute is filled, and the other part left empty, is not the caſe: for the ſhaft then appears divided, and is leſs calculated to produce a great effect.

IN ſome very rich buildings, the cablings are compoſed of reeds, huſks, ſpiral-twiſted ribbands, flowers, and various other ornaments. At the Thuilleries in Paris, there are ſome Ionic columns exquiſitely wrought in this manner; one of them by Jean Gougeon's own hand, and the reſt under his immediate inſpection.

IT is however, far better to reſerve ſuch niceties for interior decorations. In exterior compoſitions, whatever doth not contribute to the forcible effect of the whole ſtructure, is in a great meaſure uſeleſs, ſometimes even detrimental; and an expence, which might more judiciouſly be employed, where it would be more attentively conſidered. In general, it may be laid down as a maxim, that exceſſive ornaments, though they may, and often do, increaſe the magnificence of a building, almoſt always deſtroy, more or leſs, the grandeur of its effect. Parts in themſelves large, formed and diſpoſed to receive broad maſſes, or ſtrong oppoſitions of light and ſhade, muſt neceſſarily excite great ideas: but when theſe parts are broken into a number of ſmall diviſions, and their ſurfaces ſo varied, as to catch a thouſand ſpotty impreſſions of light, demi-tints, and darkneſs, the whole, will of courſe, form a confuſed appearance of trifling objects, which divide the attention, and are utterly incapable of exciting any powerful emotions whatever.

THE capital is enriched with olive leaves, as are almoſt all the antiques at Rome, of this order; the acanthus being ſeldom employed, but in the Compoſite. De Cordemoy, however, prefers the acanthus; and obſerves that the flexible ſprigs, which accompany the leaves of that plant, may more naturally be ſuppoſed to form the contour of the volutes, than the ſtiff branches of a laurel, or an olive tree. "Strange it is, ſays he, that we ſoon ceaſe to eſteem what is natural: nature and "reaſon muſt always be violated, and thus a confuſed jumble of little pointed leaves "of an olive, or a laurel, is preferred to the ſimple and graceful outline of the "acanthus."

DE CORDEMOY'S obſervation is, ſtrictly ſpeaking, juſt; yet to variety, ſomething muſt be ſacrificed, ſome liberties taken; and both the ancient as well as modern ſculptors, have, by uniting ſeveral olive, laurel, or parſley leaves together, to form diſtinct bunches; ſeparated by filaments between which they ſeem to grow; contrived to compoſe leaves: different in appearance from the acanthus indeed, yet, neither more confuſed, nor leſs graceful than that.

WITH reſpect to the manner of tracing and working this capital, the deſigns with what has been ſaid on the ſame ſubject in the Compoſite order, will ſerve as a ſufficient explanation.

THE diviſions of the entablature bear the ſame proportion to each other, as in the Tuſcan, Ionic, and Compoſite orders. The frize is enriched with a baſs relief, compoſed from various fragments in the Villa Medici at Rome. The parts and ornaments of the cornice, are all regularly diſpoſed, and perpendicularly over each other: the coffers in the ſoffit of the corona are ſquare, and the borders round them equal on all ſides; as they are in the arch of Titus, and as Palladio has made them: a precaution neglected by Vignola, notwithſtanding his uſual regularity.

THE ancients frequently employed the Ionic entablature in the Corinthian order, as appears by many of their buildings; and ſometimes, according to Vitruvius, even the Doric: though of the latter practice, there is not now, that I know of, any example extant. The ſame author obſerves, that the Greeks in their works, never employed the dentils under the modillions; becauſe the rafters, which are repreſented by the dentils, could never in reality be placed under the beams or joiſts, which are repreſented by the modillions. However this may be, we are certain that the Romans were not ſo very ſcupulous; for in their moſt eſteemed works, ſuch as the temple of Jupiter Stator, the forum of Nerva, the temple of Jupiter Tonans, and ſeveral others; we find the dentils placed under the modillions. Theſe examples will ſufficiently authoriſe the ſame practice. The origin or reaſon of things of this nature, are remote; and known to but few: while the general effect of a compoſition, is obvious to all. If deviating therefore, from what is little known, and leſs felt; will eminently contribute towards the perfection of that which all ſee, and all approve; it cannot juſtly be cenſured.

THIS liberty, however, of deviating from the origin or reaſon of things, was by the ancients; and muſt by us, be exerciſed with great caution: as it opens a wide

wide door to whim and extravagance, and leaves a latitude to the compoſer, which often betrays, and hurries him into ridiculous abſurdities. Bernini, ſometimes quitted the beaten road with judgment; but Boromini, firſt his ſcholar, and at length his rival; in attempting to conquer by novelty, and quitting the ancient rules, was ſubmerged in an ocean of extravagance. Thus, ſays the author of his life, from being among the firſt men of his time for abilities and extent of genius, Boromini ſunk to a level with the laſt, by a ridiculous application of his talents.

I DO not know who firſt introduced among us, the favorite ornament of feſtoons ſtanding up like arches, inſtead of hanging down as nature directs; nor do I recollect the name of him, who in the church of St. Romolo at Florence, has for the ſake of variety, placed the capitals at the feet of his columns: but ſelect theſe facts, as abſurd inſtances among others, of the length to which innovators may carry any ſyſtem unreſtrained by rules, and ſubject to no other laws, than the crude momentary effuſions of a vitiated fancy. Things evidently abſurd, no time nor authority, can ſanctify.

WHEN the modillion cornice is employed on large concave ſurfaces, the ſides of the modillions and coffers of the ſoffit, ſhould tend towards the center of the curve; as in the Pantheon: but when the concave is ſmall, it will be better to direct them towards the oppoſite point in the circumference, that the contraction may be leſs perceptible, and the parts dependent thereon, ſuffer leſs deviation from their natural form. The ſame rules muſt be obſerved with regard to dentils, to the abacus and baſes of columns or pilaſters, and likewiſe to the flanks of the pilaſter itſelf. But on a convex ſurface, the ſides of all theſe ſhould be parallel to each other, for it would be unnatural, and very diſagreeable to ſee them narroweſt where they ſpring out of the cornice, diverging as they advance forwards, forming ſharp angles, and a ſort of mutilated triangular plan, with enlarged ſolids, and diminiſhed intervals: all calculated to deſtroy, the uſual proportions and beauty of the compoſition.

THE Corinthian entablature may be reduced to two ninths, or one fifth of the height of the column, by the ſame rules as are given in the Ionic and Compoſite orders: but where it becomes neceſſary, or is judged expedient, to make the entablature ſo ſmall as one fifth, it will, I apprehend, be beſt to ſubſtitute the Ionic entablature, as Palladio has done in the Periſtyle of his Olympic Theatre at Vicenza, and in many others of his buildings: or elſe, to retrench the dentils of the cornice, as in one of Serlio's, and in Scamozzi's profiles; the part of the cornice under the modillion-band, remaining then compoſed of only the ovolo and ogee, ſeparated by a fillet: as in the temples of Trevi and Sciſi in Umbria, mentioned in Palladio's fourth book.

THE Corinthian order is proper for all buildings, where elegance, gaiety, and magnificence are required. The ancients employed it in temples dedicated to Venus, to Flora, Proſerpine, and the nymphs of fountains; becauſe the flowers, foliage, and volutes, with which it is adorned, ſeemed well adapted to the delicacy and elegance of ſuch deities. Being the moſt ſplendid of all the orders, it is extremely proper for the decoration of palaces, public ſquares, or galleries and arcades, ſurrounding them; for churches dedicated to the Virgin Mary, or to other

virgin ſaints: and on account of its rich, gay, and graceful appearance, it may with propriety be uſed in theatres, in ball or banquetting rooms, and in all places conſecrated to feſtive mirth, or convivial recreation.

Of PILASTERS.

PILASTERS are, I believe, a Roman invention, and certainly an improvement. The Greeks employed antæ in their temples, to receive the architraves where they entered upon the walls of the cell. Theſe, tho they were in one direction of equal diameter with the columns of the front, were in flank, extravagantly thin in proportion to their height; and neither their baſes nor capitals, bore any reſemblance to thoſe of the columns they accompanied. The Roman artiſts, diſguſted probably, with the meager aſpect of theſe antæ, and the want of accord in their baſes and capitals, ſubſtituted pilaſters in their places; which, being proportioned and decorated in the ſame manner with the columns, are certainly more ſeemly, and preſerve the unity of the compoſition much better.

PILASTERS differ from columns in their plan only; which is ſquare, as that of the column is round. Their baſes, capitals, and entablatures, have the ſame parts, with all the ſame heights and projections, as thoſe of columns; and they are diſtinguiſhed in the ſame manner, by the names of Tuſcan, Doric, Ionic, Compoſite, and Corinthian.

OF the two, the column is, doubtleſs, moſt perfect. Nevertheleſs, there are occaſions, in which pilaſters may be employed with great propriety; and ſome, where they are, on various accounts, even preferable to columns.

I AM not ignorant, that ſeveral authors are of a different opinion: a certain French Jeſuit in particular; who ſome thirty years ago, firſt publiſhed an eſſay on architecture, which from its plauſibility, force and elegance of diction, went through ſeveral editions; and operated very powerfully on the ſuperficial part of European connoiſſeurs. He inveighs vehemently againſt pilaſters, as againſt almoſt every other architectonic form but ſuch, as were imitated by the firſt builders in ſtone, from the primitive wooden huts: as if, in the whole catalogue of arts, architecture ſhould be the only one, confined to its priſtine ſimplicity, and ſecluded from any deviation or improvement whatever.

TO pilaſters, the eſſayiſt objects, becauſe they are, in his opinion, nothing better than bad repreſentations of columns. Their angles (ſays he) indicate the formal ſtiffneſs of art, and are a ſtriking deviation from the ſimplicity of nature; their projections, ſharp and inconvenient, offend and confine the eye; and their ſurfaces without roundneſs, give to the whole order a flat air: they are not ſuſceptible of diminution, one of the moſt pleaſing properties of columns; they are never neceſſary, and to ſum up the whole, he hates them: his averſion was firſt innate, but has ſince been confirmed, by the ſtudy of architecture.

CONCERNING

Plans and Elevations of Pilaster Capitals.

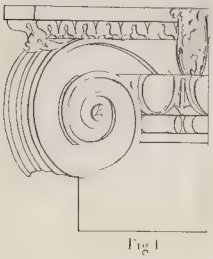


Fig 1

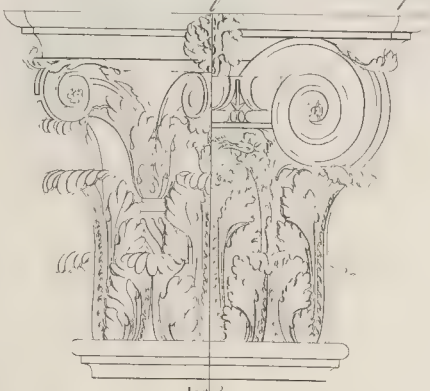


Fig 3

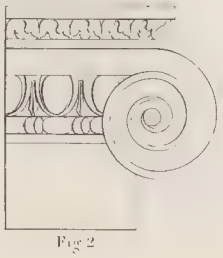


Fig 2

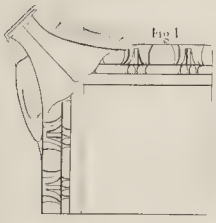


Fig 4

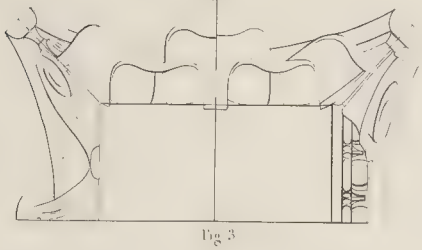


Fig 3

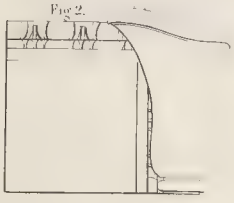
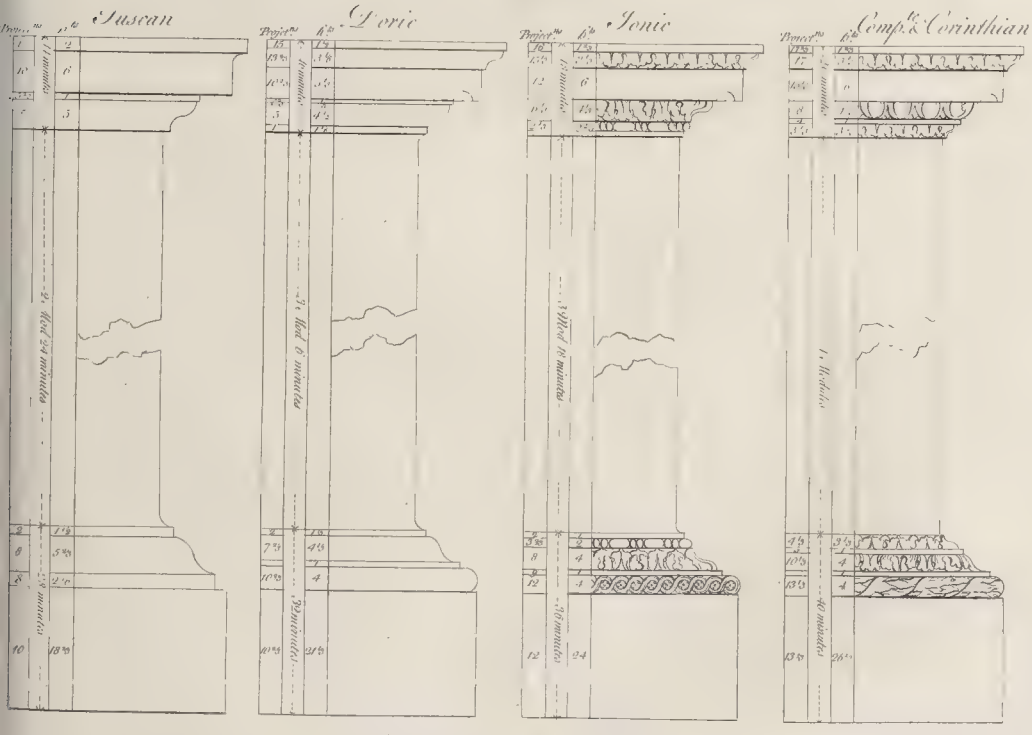


Fig 2.



Pedestals for the Orders.

CONCERNING the reverend father's inborn averſion, much need not be ſaid; and ſeveral others of his objections, as they conſiſt more of words than meaning, ſeem not to require any refutation; but, to aſſert that pilaſters are not ſuſceptible of diminution, ſhews very little acquaintance either with books of architecture, or with buildings: there are many inſtances in the remains of antiquity, of their being diminiſhed, particularly when accompanying columns; they are ſo in the temple of Mars the avenger, in the frontiſpiece of Nero, in the portico of Septimus Severus, and in the arch of Conſtantine, all at Rome. Scamozzi always gave to his pilaſters, the ſame diminution as to his columns: Palladio has diminiſhed them in the church of the Redentore at Venice, and in many others of his buildings; as Inigo Jones has likewiſe done in many of his; particularly at the Banquetting-Houſe at Whitehall.

AND if we go back to the origin of things, and conſider pilaſters, either as repreſenting the ends of partition walls, or trunks of trees, reduced to the diameter of the round trunks which they accompany, but left ſquare for greater ſtrength; the reaſon for diminiſhing them will, in either caſe, be ſtrong and evident.

IT is likewiſe an error to aſſert, that pilaſters are never neceſſary; but that columns will at all times, anſwer the ſame end: for, at the angles of all buildings, they are evidently neceſſary, both for ſolidity and beauty; becauſe the angular ſupport, having a greater weight to bear than any of the reſt, ought to be ſo much the ſtronger; ſo that its diameter muſt either be increaſed, or its plan altered from a circle to a ſquare; the latter of which is certainly the moſt reaſonable expedient, on ſeveral accounts; but chiefly as it obviates a very ſtriking defect; occaſioned by employing columns at the angles of a building; which is, that the angle of the entablature is left hanging in the air without any ſupport: a ſight very diſagreeable in ſome oblique views, and in itſelf very unſolid.

IT is indeed cuſtomary in porches, and other detached compoſitions, to employ columns at the angles; and it is judicious ſo to do: for of two defects, the leaſt is to be preferred. And although father Laugier, the writer whoſe objections I have juſt now cited, could ſee no reaſon for rejecting detached pilaſters, when engaged ones were ſuffered; yet there is a very ſubſtantial reaſon, which is, that a detached pilaſter in ſome oblique views, appears thicker than it does in front, nearly in the ratio of ſeven to five; and conſequently if, when ſeen in front, it appears well proportioned in itſelf, and with regard to the columns it accompanies; it never can appear ſo, when viewed upon the angle; as may be obſerved in the colonades of the great court at Burlington-Houſe in Piccadilly, and at the porch of St. George's Church, near Hanover-Square.

ENGAGED pilaſters are employed in churches, galleries, halls, and other interior decorations, to ſave room: for as they ſeldom project beyond the ſolid of the walls, more than one quarter of their diameter, they do not occupy near ſo much ſpace, even as engaged columns. They are likewiſe employed in exterior decorations; ſometimes alone, inſtead of columns, on account of their being leſs expenſive; as at the Duke of Queenſbury's Houſe in Burlington-Gardens; General Wade's Houſe in the ſame place; and in many other buildings here in London. At other

times, they accompany columns; being placed behind them to ſupport the ſpringing of the architraves, as in the Pantheon at Rome; and in the porch of St. Martin in the Fields, Weſtminſter: or on the ſame line with them, to fortify the angles; as in the portico of Septimus Severus at Rome, and in the church of St. Laurence of the Jewry in London. Blondel ſays, they may likewiſe be employed inſtead of columns, detached to form periſtyles and porticos: but there is no inſtance of this, that I remember, in all the remains of antiquity; neither has any modern architect, I believe, been ſo deſtitute of taſte, as to put it in practice.

WHEN pilaſters are uſed alone, as principal in the compoſition; they ſhould project one quarter of their diameter beyond the walls, as Scamozzi teaches, and as they do at the Banquetting-Houſe, Whitehall; which gives them a ſufficient boldneſs, and, in the Corinthian and Compoſite orders, is likewiſe moſt regular; becauſe the ſtems of the volutes, and the ſmall leaves in flank of the capital, are then cut exactly through their middles: but if the cornice of the windows ſhould be continued in the inter-pilaſter, as is ſometimes uſual; or if there ſhould be a cornice, to mark the ſeparation between the principal and ſecond ſtory, as at the Manſion-Houſe of London; or large impoſts of arches; the projection muſt in ſuch caſes, be increaſed; provided it is not otherwiſe ſufficient to ſtop the moſt prominent parts of theſe decorations; it being very diſagreeable, to ſee ſeveral of the uppermoſt mouldings of an impoſt or cornice, cut away perpendicularly, in order to make room for the pilaſter, while the cornice or impoſt on each ſide, projects conſiderably beyond it; as has been done at St. Peter's of the Vatican, as well as in ſeveral other buildings of Rome, and other towns of Italy. Mutilations, are on all occaſions, ſtudiouſly to be avoided, as being deſtructive of perfection; and ſtrong indications, either of inattention or ignorance in the compoſer.

WHEN pilaſters are placed behind columns, and very near them, they need not project above one eighth of their diameter, or even leſs; excepting there ſhould be impoſts, or continued cornices in the inter-pilaſter: in which caſe, what has been ſaid above, muſt be attended to: but if they be far behind the columns, as in porticos, porches, and periſtyles, they ſhould project one ſixth of their diameter at leaſt; and when they are on a line with columns, their projection is to be regulated by that of the columns; and conſequently, it never can be leſs than a ſemi-diameter, even when the columns are engaged as much as poſſible. This extraordinary projection, however, will occaſion no very great deformity; as the largeſt apparent breadth of the pilaſter will exceed the leaſt, only in the ratio of eleven to ten, or thereabouts. But if columns be detached, the angular pilaſter ſhould always be coupled with a column, to hide its inner flank; as in the portico of Burlington-Houſe: becauſe the pilaſters will otherwiſe appear diſproportionate, when ſeen from the point of view proper for the whole building; eſpecially, if the fabrick be ſmall, and the point of view near.

IT is ſometimes cuſtomary to execute pilaſters without any diminution: in the antiques, there are ſeveral inſtances thereof, as well as of the contrary practice; and Palladio, Vignola, Inigo Jones, and many of the greateſt architects, have frequently done ſo. Nevertheleſs it is certain, that diminiſhed pilaſters are, on many accounts, much preferable. There is more variety in their form; their capitals are better proportioned, both in the whole, and in their parts, particularly in the Compoſite and

and Corinthian orders; and the irregularities occaſioned by the paſſage of the architraves, from diminiſhed columns, to undiminiſhed pilaſters, are thereby avoided; as are likewiſe the difficulties of regularly diſtributing, the modillions and other parts of the entablature, either when the pilaſters are alone, or accompanied with columns.

ANOTHER diſagreeable effect of undiminiſhed pilaſters, is likewiſe obviated by rejecting them: indeed, I am at a loſs to account for it; and, as it is diametrically oppoſite to a received law in optics, I imagined it might be the reſult of ſome defect in my own ſight; till by enquiry, I found others were affected in the ſame manner. It is this; the top of the ſhaft always appears broader than the bottom; as any one may obſerve, by caſting a glance on the pilaſters of St. Paul's; of St. George's, Hanover-Square; or any others that are not diminiſhed. The author of *l'Eſprit des Beaux Arts*, accounts for a ſimilar effect, in a manner more ſubtle, I believe, than true. He makes it to be the reſult of a nice compariſon, between the real and the apparent diſtance; which, to me ſeems to have little, or rather no ſhare at all in it. An ingenious * writer of our own country obſerves, that the ſenſes ſtrongly affected in ſome one manner, cannot quickly change their tenor, or adapt themſelves to other things; but continue in their old channel, until the ſtrength of the firſt mover decays: this being admitted, it is not improbable, that the capital, which is immediately above the ſhaft; being conſiderably broader, and certainly the firſt attractive object; may have an influence on the apparent upper breadth of the ſhaft, and occaſion the effect abovementioned. Perhaps too, the light may in ſome meaſure contribute thereto, it being ſtronger at the foot of the ſhaft, than towards its top.

THE ſhafts of pilaſters are ſometimes adorned with flutings, in the ſame manner as thoſe of columns; the plan of which may be a trifle above a ſemi-circle: and they muſt be to the number of ſeven on each face, which makes them nearly of the ſame ſize with thoſe of the columns. The interval between them muſt be either one third, or one fourth of the flute in breadth; and when the pilaſter is placed on the pavement, or liable to be broken by the touch of paſſengers, the angle may be rounded off, in the form of an aſtragal; between which and the adjoining flute, there muſt be a fillet, or interval, of the ſame ſize with the reſt; as in the porch of the Pantheon at Rome.

THE flutes may, like thoſe of columns, be filled with cablings to one third of their height; either plain and ſhaped like an aſtragal, or enriched, according as the reſt of the compoſition is ſimple, or much adorned. Scamozzi is of opinion, that there ſhould be no flutings on the ſides of engaged pilaſters, but only in front: and whenever cornices or impoſts are continued home to the pilaſter, this ſhould particularly be attended to; that the different mouldings of theſe members, by entering into the cavities of the flutes, may not be cut off in irregular and diſagreeable forms. But if the flanks of the pilaſter are entirely free, it may be as well to enrich them in the ſame manner as the front, provided the flutes can be ſo diſtributed, as to have a fillet or interval adjoining to the wall; which is always neceſſary, to mark the true ſhape of the pilaſter diſtinctly.

* See Burke's Enquiry into the Origin of our Ideas of the Sublime and Beautiful.

THE capitals of Tuſcan or Doric pilaſters, are profiled in the ſame manner as thoſe of the reſpective columns: but in the capitals of the other orders, there are ſome trifling differences to be obſerved. In the antique Ionic capital, the extraordinary projection of the ovolo makes it neceſſary, either to bend it inwards conſiderably towards the extremities, that it may paſs behind the volutes; or, inſtead of keeping the volutes flat in front, as they commonly are in the antique; to twiſt them outwards, till they give room for the paſſage of the ovolo. Le Clerc thinks the latter of theſe expedients, the beſt; and, that the artifice may not be too ſtriking, the projection of the ovolo may be conſiderably diminiſhed, as in the annexed deſign*; which, as the moulding can be ſeen in front only, will occaſion no diſagreeable effect.

THE ſame difficulty ſubſiſts, with regard to the paſſage of the ovolo behind the angular Ionic volutes: Le Clerc therefore adviſes to open, or ſpread the volutes ſufficiently, to leave room for the ovolo to paſs behind them, as in the deſign † annexed; which may eaſily be done, if the projection of the ovolo is diminiſhed. Inigo Jones has in the Banquetting-Houſe, made the two ſides of the volutes parallel to each other, according to Scamozzi's manner; and at the ſame time has continued the ovolo in a ſtraight line under them: ſo that the volutes have an enormous projection, which added to the other faults of theſe capitals, renders the whole compoſition unuſually defective, and exceedingly ugly.

WHAT has been ſaid, with regard to the paſſage of the ovolo behind the volutes in the Ionic order, is likewiſe to be remembered in the Compoſite: and in the Corinthian, the lip, or edge of the vaſe or baſket, may be bent a little inwards, towards its extremities; by which means, it will eaſily paſs behind the volutes. The leaves in the Corinthian and Compoſite capitals, muſt not project beyond the top of the ſhaft, as they do at St. Carlo in the Corſo at Rome, and at the Banquetting-Houſe, Whitehall: but the diameter of the capital, muſt be exactly the ſame as that of the top of the ſhaft. And to make out the thickneſs of the ſmall-bottom leaves, their edges may be bent a trifle outwards; and the large angular leaves may be directed inwards, in their approach towards them; as in the annexed deſign‡: and as they are executed in the church of the Roman College at Rome. Where the ſmall leaves have a conſiderable thickneſs, though the diameter of the capital is exactly the ſame as that of the ſhaft. In each front of the Compoſite or Corinthian pilaſter-capital, there muſt be two ſmall leaves, with one entire, and two half large ones: they muſt be either of olive, acanthus, parſley, or laurel; maſſed, divided, and wrought in the ſame manner as thoſe of the columns are; the only difference being, that they will be ſomewhat broader.

THE employing half, or other parts of pilaſters, that meet, and as it were penetrate each other, in inward or outward angles, ſhould as much as poſſible be avoided; becauſe it generally occaſions ſeveral irregularities in the entablatures, and ſometimes in the capitals alſo. Particular care muſt be taken, never to introduce more than one of theſe breaks in the ſame place; for more can never be neceſſary. In many of the churches at Rome, we ſee half a dozen of them together; which

* Pl. of Pilaſters, fig. 2. † Pl. of Pilaſters, fig. 1. ‡ Pl. of Pilaſters, fig. 3.

produces

Persians and Caryatides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produces a long ſeries of undulated capitals and baſes, and a number of mutilated parts in the entablature: than which, nothing can be more confuſed or diſagreeable.

INSTEAD of pilaſters, it is ſometimes cuſtomary to employ columns, that penetrate each other in the inward angle. There are ſeveral inſtances of this at Paris, particularly about the Louvre; but it is a practice univerſally condemned, and the bad effect thereof may be ſeen on the front of the Royal Exchange towards Cornhill, and within the Banquetting-Houſe at Whitehall.

Of PERSIANS *and* CARYATIDES.

BESIDES columns and pilaſters, it is ſometimes cuſtomary to employ repreſentations of the human figure, to ſupport entablatures in buildings. The male figures are called Perſians, Telamones, or Atlantides; and the females Carians, or Caryatides. The origin of this cuſtom, Vitruvius tells us, is as follows.

THE inhabitants of Caria, a city of the Peloponneſus, having joined the Perſians in a war againſt the reſt of the Greeks; and that war, being terminated by the defeat of the Perſians, the Greeks commenced hoſtilities againſt the Caryates, took their city, demoliſhed it, and putting all the males to the ſword; carried the females into captivity: and to treat them with ſtill greater ignominy, they forbad the ladies to diveſt themſelves of their robes, or any of their ornaments; that ſo, they might not only be once led in triumph, but in a manner, ſuffer the mortification of a triumph all their lives after; by appearing conſtantly in the ſame dreſs, as on the triumphal day. And further, as an everlaſting teſtimony of the puniſhment inflicted on the Caryates, and to inform poſterity what had been the nature of their chaſtiſement; the architects of that time, inſtead of columns, employed the repreſentations of theſe women, to ſupport the entablatures of their public buildings.

THE Lacedemonians did the ſame thing after the battle of Platea; erecting, with the ſpoils taken from the enemy, a gallery; which they called Perſian: wherein ſtatues, in the form of captive Perſians, with their uſual dreſſes, ſupported the arches; intending thereby to puniſh that nation in ſuch a manner, as its pride had merited; and to leave poſterity, a monument of the valour and victories of the Lacedemonians.

THE introduction of figures of men and animals to ſupport burthens in buildings, or otherwiſe; had certainly an earlier origin, than that aſcribed to it by Vitruvius. It ſeems to have been a very early and favourite idea, among ſeveral people of the remoteſt antiquity. Homer mentions the practice in the ſeventh book of the Odyſſey, and I think, in one or more other places of his poems. Hiram's molten ſea, was ſupported by twelve bulls; and on the walls of the oracle he placed alternate cherubims and palm trees, ſupporting wreaths of flowers, and probably

the ceiling. In the ſepulchre of King Oſymanduas, which, as Diodorus Siculus relates, was ten furlongs in circuit; there was a ſtone hall, forming a ſpace of four hundred feet every way, of which the roof inſtead of pillars, was ſupported by animals, each of a ſingle ſtone, and twenty-four feet high; being carved in the ancient Egyptian manner. The roof was alſo entirely of ſtone, compoſed of ſtones twelve feet ſquare; the whole being coloured to repreſent an azure ſky, beſpangled with ſtars. Of the number or natures of theſe animals, nothing is ſaid; but if the whole ſpace was covered, more than one thouſand would have been requiſite to ſupport the roof; and more than a thouſand ſtones to form it. In ſeveral Indian buildings too, ſuppoſed to be of great antiquity; may be obſerved figures of men and animals ſupporting the roofs, after the manner deſcribed in the ſepulchre of Oſymanduas; particularly in that cut in the ſolid rock near Bombay, uſually called the Elephanta.

AMONG the antiquities at Rome, there are various fragments of male figures, which, from their attitudes, and ſome ornaments about them, may be conjectured to have ſerved as ſupports to the entablatures of buildings: but there are no remains of any female ſtatues of that kind, excepting the three Graces ſupporting an urn, in the Villa Borgheſi. Pliny makes mention of ſome by the hand of Praxiteles, which in his time, were in the library of Aſinius Pollio at Rome: and of other female figures in the Pantheon, where, although the ſtructure was enriched with ſeveral works of Diogenes the Athenian, they were held in much eſteem: they ſeem to have been cut in baſſo or alto relievo, to have been placed over the columns, and were probably, as Fontana conjectures, employed to adorn the Attic; and ſupport its cornice.

AMONG the antiquities of Athens, publiſhed by Mr. Le Roy, there are five Caryatides ſupporting an entablature, contiguous to the temple of Erectheus. They bear a conſiderable reſemblance to thoſe celebrated ones of Jean Goujon, in the Swiſs Guard Room of the Louvre at Paris; of one of which, there is a repreſentation, fig. 8, plate of Caryatides. Speaking of theſe figures, Monſieur Le Roy expreſſes himſelf in the following manner. "The hiſtory of the Caryatick "order, ſays he, is ſo curious, that almoſt all authors have quoted it; but though "we are well informed of its origin, yet we have hitherto learnt nothing of the "proportions obſerved therein by the ancients; Vitruvius is ſilent upon the ſubject, "there is no monument of that order at Rome, and the only ancient example "perhaps, exiſting in Europe, which is that here given; has hitherto remained "unnoticed. The four figures ſtanding in front, reſemble each other entirely, "excepting, that the two to the right have the right leg foremoſt, and the two to "the left, the left leg; in order to ſymmetriſe more perfectly. They are crowned "with capitals, upon which is placed the entablature; remarkable, by a ſuppreſſion "of the frize; a peculiarity which the ancients, perhaps, uſually practiſed to "characterize this order.

"THE general maſs of the entablature is very high; it exceeds a third of the "height of the figures: and it would be difficult to aſcribe a reaſon for this exceſs, "were it not conſidered that a full dreſſed woman, which theſe repreſent, forms a "ſhape more in the proportion of a very ſhort Doric column, than of an elegant "Ionic one; which probably induced the architect to enlarge his entablature, to prevent

" prevent its appearing too ſlight for the figures. Be this as it may, the profile of " the entablature is very perfect. The dentils in the cornice ſhew it to be Ionic; " and there are on the upper faſcia, an ornament conſiſting of little rounds, like " nail heads, which has not been introduced in any of the other orders.

" BUT that which is moſt excellent in this building, is doubtleſs the Carya- " tides themſelves. There are now only five left of the ſix originally there; they " are of a beautiful deſign, with drapery in the ſtile of that of the Flora, in the " Farneſian Palace at Rome."

I PERFECTLY agree with Mr. Le Roy, as to the beauty of the figures, but whatever might have been the architect's inducement to enlarge his entablature, he certainly has done it to a monſtrous exceſs: it ſeems calculated to cruſh the figures to atoms, and all that, in my humble idea, can either be ſaid of the profile of the cornice, or the clumſy capitals on which the entablature ſtands, is, that far from deſerving to be admired, they would ſcarcely be tolerated any where, but in a traveller's book: and it ſeems very extraordinary that Monſieur Le Roy, who is himſelf a man of excellent taſte; ſhould applaud, what in his own judgment he muſt condemn.

JEAN GOUGEON, in his beautiful compoſition at the Louvre, abovementioned, has far ſurpaſſed this Greek ſpecimen of the Caryatick order. His figures, which are twelve feet high, and of exquiſite workmanſhip, ſtand on baſes one ſixth of that height; on their heads are capitals of the Doric order, of which, the ſhape and proportion ſerve to decorate, but not to over-load the head; the capitals ſupport a tribune, forming the entablature; which conſiſts of architrave, frize, and cornice. It is richly decorated, of the Ionic order; and meaſures one quarter of the height of the figures, including the baſes on which they ſtand. By introducing theſe baſes, the ſculptor has artfully contrived to diminiſh the height, and conſequently the bulk of his figures; and by a regular diviſion of his entablature, he has rendered it light, at the ſame time that it is truly proportioned to the figures by which it is ſupported.

IT is not cuſtomary now, as formerly, ſays Le Clerc, to repreſent Caryatides, with attributes of ſlavery and ſervitude. Such characters are too injurious to the Fair. On the contrary, they are at preſent, conſidered as the richeſt, moſt valued ornaments of buildings; and repreſented under the figures of Prudence, Wiſdom, Juſtice, Temperance, &c.

FREART DE CHAMBRAY, blames this practice; which he conſiders as the effect of inadvertency, in the architects who firſt introduced it: obſerving, that if they had ſufficiently reflected on the text of Vitruvius, with regard to the origin of Caryatides, they would have perceived the impropriety of employing the repreſentations of ſaints and angels, loaded like ſlaves, with cornices, and other heavy burdens; and likewiſe, that of employing the Caryatick order promiſcuouſly, in all ſorts of buildings; particularly in ſacred ſtructures, which are the houſes of God, and aſylums of mercy; where vengeance and ſlavery ought never to appear.

ON the other hand Blondel obſerves, that, though this remark be juſt, if the origin of theſe ornaments be rigorouſly attended to; yet to ſerve in any ſhape in the houſe of God, and in particular at the altar; has always appeared in the minds of the prophets, and ſaints, ſo glorious and great; that not only men, but angels, ought to eſteem it a happineſs: and that conſequently it can be no indication of diſreſpect, to employ their repreſentations, in offices which they themſelves would execute with pleaſure.

THE ancients, ſays the ſame author, made frequent uſe of Caryatick and Perſian figures, and delighted in diverſifying them in a thouſand manners. The modern artiſts have followed their example; and there is a great variety of compoſitions of this kind, to be met with in different parts of Europe: of ſome of which, deſigns are exhibited in the annexed plate; and others may be invented, and adapted to different purpoſes with great propriety; provided the figures introduced be analogous to the ſubject, as Mr. Ware obſerves; and ſeem at leaſt, a neceſſary part in the compoſition. Thus, ſays Le Clerc, if they are employed to ſupport the covering of a throne, they may be repreſented under the figures and ſymbols of heroic virtues; if to adorn a ſacred building, they muſt have an affinity to religion; and when they are placed in banquetting rooms, ball rooms, or other apartments of recreation; they muſt be of kinds proper to inſpire mirth, and promote feſtivity.

IN compoſing them, particular care muſt be taken to avoid indecent attitudes, diſtorted features, and all kinds of monſtrous or horrid productions; of which there are ſuch frequent inſtances, in the works of our northern predeceſſors. On the contrary, the attitudes muſt be ſimple and graceful; the countenances, though varied, always pleaſing, and ſtrongly marked with the expreſſion peculiar to the occaſion, or the object repreſented. There muſt be no variety in the general form or outline, of the different figures employed in the ſame compoſition, and but little flutter in the draperies; which ought to ſit cloſe to the bodies of the figures, with folds contrived to expreſs diſtinctly, both their action and ſhape. Le Clerc obſerves that they ſhould always have their legs cloſe together, and the arms cloſe to the body or head; that ſo they may have, as much as poſſible, the ſhape of columns, whoſe office they are to perform: and it may be added, that for the ſame reaſon, their attitudes ſhould be as nearly perpendicular, as can conveniently be, without giving a ſtiff conſtrained air to the figures.

The ſame author obſerves, that Caryatides ought always to be of a moderate ſize; leſt, being too large, they ſhould appear hideous in the eyes of the fair ſex: and indeed, as theſe figures are generally repreſented in endearing offices, and under the forms of amiable and benevolent beings, the caution ſeems very proper. It will therefore be judicious, never to make them much larger than the human ſtature.

BUT male figures may, on the contrary, be of any ſize; the larger the better: as they will then be fitter to ſtrike with awe and aſtoniſhment. There are few nobler thoughts, in the remains of antiquity, than Inigo Jones's Perſian Court; the effect of which, if properly executed, would have been ſurpriſing and great in the higheſt degree.

MALE figures may be introduced with propriety in arſenals, or galleries of armour, in guard rooms, and other military places; where they ſhould repreſent the figures of captives, or elſe of martial virtues; ſuch as Strength, Valour, Wiſdom, Prudence, Fortitude, and the like. Their entablature muſt be Doric, and bear the ſame proportion to them, as to columns of the ſame height: and the proper entablatures for Caryatides will be either Ionic, or Corinthian, according as the character of the figures is more or leſs delicate.

PERSIAN or Caryatick figures, ought never to be employed to ſupport the ſame entablature with columns: for figures of men or women, as high as columns, are conſiderably more bulky; and when they are of an uncommon ſize, convey an idea of greatneſs, that entirely deſtroys the effect of the columns, by making them appear very trifling. Neither ſhould they be placed upon columns, as they are in the court of the Old Louvre at Paris, for the ſame reaſons.

PALLADIO, ſenſible of this inconvenience, yet willing to introduce a ſpecimen of Perſian figures, has in the Valmarano Palace at Vicenza, divided the large Compoſite pilaſters which decorate the front, into five parts; three of which he has given to a diminutive Corinthian order, ſqueezed into the inter-pilaſters, and feebly ſuſtaining the extremities of the fabrick; while the remaining two parts are, at the angles, occupied by figures on pedeſtals, as diminutive as the aforeſaid Corinthian order, and introduced with as little propriety; more eſpecially as they are made to ſupport the ends of an enormous, bulky Compoſite entablature, of which the height ſurpaſſes two thirds of that of the figures themſelves.

IT is ſometimes cuſtomary to employ terms, inſtead of Caryatides or Perſians, to ſupport the entablatures of gates, monuments, chimney-pieces, and ſuch like compoſitions. Theſe figures owe their origin to the ſtones, uſed by the ancients to mark the limits of each particular perſon's poſſeſſions. Numa Pompilius, to render theſe inviolable, and prevent encroachments, erected the Terminus into a deity, inſtituted feſtivals and ſacrifices to his honour, and built a temple on the Tarpeian Mount which he dedicated to him, and in which he was repreſented under the figure of a ſtone.

IN proceſs of time, however, the God Terminus was repreſented with a human head, placed on a poſt or ſtone, ſhaped like an inverted obeliſk; which being on particular ſolemnities, adorned with garlands; compoſed altogether, a very pleaſing form: to the imitation of which, may with great probability be attributed, the introduction of theſe ornaments into building: where they have been varied into a great diverſity of ſhapes. I have occaſionally, in the courſe of this work, given ſome deſigns of them; and many others may be invented, and adapted to the particular purpoſes, for which they ſhall be intended.

IN conſideration of their origin, the Termini are proper ornaments in gardens, and in fields; where the upper part of them may repreſent Jupiter, who in the remoter ages of antiquity, was protector of boundaries: or ſome of the rural deities; as Pan, Flora, Pomona, Vertumnus, Ceres, Priapus, Faunus, Sylvanus, Nymphs and Satyrs. Mr. Ware recommends the uſe of them as boundaries to counties,

where they may be enriched with ornaments alluſive to the produce, manufacture, and commerce of each reſpective county.

THE three firſt figures, in the annexed plate of Perſians and Caryatides, are copied from Candelabre's, in St. Peter's of the Vatican. They are caſt from models of Michael Angelo Buonaroti, and repaired either by himſelf, or doubtleſs under his direction: for the workmanſhip is very perfect. Figure 2, may be employed in buildings; but the others are properer for the angles of coved ceilings, or other ſuch ornamental works, being not unlike ſome introduced by the Caracchi, in the Farneſian ceilings at Rome. No. 4, is a copy of one of the figures that ſurround the choir, in the cathedral of Milan; which are the work of Andrea Biffi, a celebrated Milaneſe ſculptor. No. 5, is executed in the Judgment-Hall, of the Stadt-Houſe of Amſterdam, by Artus Quellinus. No. 6, is an admired work of Michael Angelo, now in the Villa Ludoviſi at Rome. No. 7, is in part by the ſame hand, and executed from the waiſt upwards, in the monument of Pope Julius the ſecond, in the church of St. Pietro, in the Vincoli at Rome. No. 8, is one of thoſe executed by Jean Gougeon, in the Swiſs Guard-Room of the Old Louvre, at Paris; as has before been mentioned. No. 9 and 10, are taken from paintings of Daniel da Volterra, in the church of the Trinta del Monte at Rome. No. 11, is a figure in baſſo relievo, on the Goldſmiths arch at Rome; and No. 12, is copied from an original deſign of Polidore da Caravaggio, now in my poſſeſſion.

Of PEDESTALS.

MOST writers conſider the pedeſtal as a neceſſary part of the order, without which, it is not eſteemed complete. It is indeed a matter of ſmall importance, whether it be conſidered in that light, or as a diſtinct compoſition: nevertheleſs, ſeeing that in the particular deſcription, given by Vitruvius, of the Doric, Corinthian, and Tuſcan orders, no notice is taken of any pedeſtal; and that, in the Ionic order, he only mentions it as a neceſſary part in the conſtruction of a temple, without ſignifying that it belongs to the order, or aſſigning any particular proportions for it, as he doth for the parts of the column and the entablature—I have judged it more regular to treat of the pedeſtal as a ſeparate body; having no more connection with the order, than as an attic, a baſement, or any other part with which it may, on ſome occaſions, be accompanied.

A PEDESTAL like a column or an entablature, is compoſed of three principal parts; which are the baſe, the dye, and the cornice. The dye is always nearly of the ſame figure; being conſtantly either a cube, or a parallelopiped; but the baſe and cornice are varied, and adorned with more or fewer mouldings, according to the ſimplicity or richneſs of the compoſition in which the pedeſtal is employed. Hence pedeſtals are, like columns, diſtinguiſhed by the names of Tuſcan, Doric, Ionic, Compoſite, and Corinthian.

SOME authors are very averſe to pedeſtals, and compare a column raiſed on a pedeſtal, to a man mounted on ſtilts; imagining that they were firſt introduced

introduced merely through neceſſity, and for want of columns of a ſufficient length.

It is indeed true, that the ancients often made uſe of artifices to lengthen their columns; as appears by ſome that are in the Baptiſtery of Conſtantine at Rome; the ſhafts of which, being too ſhort for the building, were lengthened and joined to their baſes, by an undulated ſweep, adorned with acanthus leaves. And the ſame expedient has been made uſe of in ſome fragments, which were diſcovered a few years ago at Nimes, contiguous to the temple of Diana. Nevertheleſs it doth not ſeem proper to comprehend pedeſtals, in the number of theſe artifices; ſince there are many occaſions on which they are evidently neceſſary; and ſome, in which the order, were it not ſo raiſed, would loſe much of its beautiful appearance. Thus, within our churches, if the columns ſupporting the vault were placed immediately on the ground, the ſeats would hide their baſes, and a good part of their ſhafts; and, in the theatres of the ancients, if the columns of the ſcene had been placed immediately on the ſtage, the actors would have hid a conſiderable part of them from the audience. For which reaſon, it was uſual to raiſe them on very high pedeſtals; as was likewiſe cuſtomary in their triumphal arches. And in moſt of their temples, the columns were placed on a baſement, or continued pedeſtal: that ſo, the whole order might be expoſed to view, notwithſtanding the crouds of people with which theſe places were frequently ſurrounded. And the ſame reaſon will authoriſe the ſame practice in our churches, theatres, courts of juſtice, or other publick buildings, where crouds frequently aſſemble.

In interior decorations, (where generally ſpeaking, grandeur of ſtile is not to be aimed at,) a pedeſtal diminiſhes the parts of the order, which otherwiſe might appear too clumſy; and has the farther advantage of placing the columns in a more favourable view, by raiſing their baſe nearer to the level of the ſpectator's eye. And in a ſecond order of arcades, there is no avoiding pedeſtals; as without them, it is impoſſible to give the arches any tolerable proportion.

Sometimes too, the ſituation makes it neceſſary to employ pedeſtals: an inſtance of which there is in the Luxembourg Palace at Paris: where the body of the building ſtanding on higher ground than the wings, the architect was obliged to raiſe the firſt order of the wings on a pedeſtal, to bring it upon a level with that of the body, or *corps de logis* of the building, which ſtands immediately upon the pavement.

These inſtances, will ſufficiently ſhew the neceſſity of admitting pedeſtals in decorations of architecture. With regard to the proportion, which their height ought to bear, to that of the columns they are to ſupport, it is by no means fixed: the ancients, and moderns too, having in their works varied greatly in this reſpect; and adapted their proportions to the occaſion, or to the reſpective purpoſes for which the pedeſtals were intended. Thus, in the amphitheatres of the ancients, the pedeſtals in the ſuperior orders were generally low; becauſe in the apertures of the arches, they ſerved as rails to incloſe the portico, and therefore were, for the conveniency of leaning over, made no higher than was neceſſary to prevent accidents: and the caſe is the ſame in moſt of our modern houſes; where the height of the pedeſtals in the ſuperior orders, is generally determined by the cills of

the windows. The ancients, in their theatres, made the pedeſtals in the firſt order of their ſcene, high; for the reaſon mentioned in the beginning of this chapter: but the pedeſtals in the ſuperior orders were very low; their chief uſe being to raiſe the columns ſo, as to prevent any part of them from being hid, by the projection of the cornice below them. And thus, on different occaſions, they uſed different proportions; being chiefly guided by neceſſity in their choice. The moderns have followed their example; as will appear to any one who examines the works of Palladio, of Vignola, of Michael Angelo, Scamozzi, and many other famous architects.

NEVERTHELESS, writers on architecture have always thought it incumbent upon them, to fix a certain determinate proportion for the pedeſtal, as well as for the parts of the order. It would be uſeleſs to enumerate in this place, their different opinions: but I muſt beg leave to obſerve, that Vignola's method is the only true one. His pedeſtals, are in all the orders of the ſame height; being one third of the column: and as their bulk increaſes or diminiſhes of courſe, in the ſame degree as the diameters of their reſpective columns do, the character of the order is always preſerved; which according to any other method is impoſſible.

IN the deſigns which I have given of arches with pedeſtals, the pedeſtals are all of the ſame height; each of them being three tenths of the height of their reſpective columns. But it is not neceſſary to adhere always to this proportion: they may be higher or lower, as the occaſion ſhall require. It is, however, to be obſerved, that, when pedeſtals are profiled under each column, and the dye is much leſs than a ſquare in height, the pedeſtal has a clumſy appearance; and when a pedeſtal of the ſame kind exceeds one third of the height of the column, it has a lean, unſolid, tottering aſpect. But if they are continued without any breaks, this need not be attended to; though indeed, there are very few occaſions in which pedeſtals higher than one third of the column, ought to be ſuffered; as they leſſen too much the parts of the order, and become themſelves too principal in the compoſition.

WITH regard to the diviſions of the pedeſtal, if the whole height be divided into nine parts, one of them may be given to the height of the cornice, two to the baſe, and the remaining ſix to the dye; or if the pedeſtal is lower than ordinary, its height may be divided into eight parts only, of which one may be given to the cornice, two to the baſe, and five to the dye; as Palladio has done in his Corinthian order; and Perrault in all the orders.

THE plan of the dye is always made equal to that of the plinth of the column; the projection of the cornice may be equal to its height; and the baſe, being divided into three parts, two of them will be for the height of the plinth, and one for the mouldings, of which the projection muſt be ſomewhat leſs than the projection of the cornice; that ſo, the whole baſe may be covered and ſheltered by it: a precaution which Scamozzi has obſerved in all his deſigns, though Palladio has neglected it in the greateſt part of his; the palace of the Porti, and one or two other buildings in the Vicentine excepted.

THESE

THESE meaſures are common to all pedeſtals; and in the annexed plate there are deſigns of proper ones for each order; in which the forms and dimenſions of the minuter parts, are accurately drawn and figured.

IT is ſometimes cuſtomary to adorn dyes of pedeſtals with projecting tablets, or with pannels ſunk in, and ſurrounded with mouldings. The former of theſe practices ought ſeldom to be admitted, as theſe tablets alter the general figure of the pedeſtal, and when they project much, give it a heavy appearance. And the latter ſhould be reſerved for very large pedeſtals only, of ſuch kinds as thoſe ſupporting the Trajan and Antonine columns at Rome, and the Monument in London; where they may be filled with inſcriptions, or adorned with bas-reliefs, analogous to the occaſion on which the column was erected. Even in the largeſt buildings, pedeſtals are commonly too ſmall to admit of ſuch ornaments, which only ſerve to give them an unſolid, trifling appearance, and contribute to complicate, without improving, the compoſition.

WITH regard to the application of pedeſtals, it muſt be obſerved, that when columns are entirely detached and at a conſiderable diſtance from the wall, as when they are employed to form porches, periſtyles, or porticos, they ſhould never be placed on detached pedeſtals, as they are in ſome of Scamozzi's deſigns, in the temple of Sciſi, mentioned by Palladio; and at Lord Archer's Houſe, now Lowe's Hotel, in Covent Garden: for then they may indeed be compared to men mounted on ſtilts, as they have a very weak and tottering appearance. In compoſitions of this kind, it is generally beſt to place the columns immediately upon the pavement; which may either be raiſed on a continued ſolid baſement, or be aſcended to by a flight of fronting ſteps, as at St. Paul's, and at St. George's, Bloomſbury: but if it be abſolutely neceſſary to have a fence in the intercolumniations; (as in the caſe of bridges, and other buildings on the water; or in a ſecond order;) the columns may then, in very large buildings, be raiſed on a continued plinth, as in the upper order of the weſtern porch of St. Paul's, which, in ſuch caſe will be ſufficiently high: and in ſmaller buildings, wherever it may not be convenient nor proper to place the balluſtrade between the ſhafts; the columns may be raiſed on a continued pedeſtal; as they are in Palladio's deſign for Signior Cornaro's Houſe at Piombino, and at the Villa Arſieri, near Vicenza; another beautiful building of the ſame maſter.

THE baſe and cornice of theſe pedeſtals, muſt run in a ſtraight line on the outſide throughout: but the dyes are made no broader than the plinths of the columns; the intervals between them being filled with balluſtres: which is both really and apparently lighter, than if the whole pedeſtal were a continued ſolid.

IT will be ſuperfluous to caution our Engliſh architects againſt employing triangular, circular, or polygonal pedeſtals in their buildings; or ſuch as are ſwelled, and have their dye in the form of a balluſtre, or are ſurrounded with cinctures: ſuch extravagances, though frequent in ſome foreign countries, are ſeldom to be met with in England, and are now laid aſide, wherever good taſte prevails.

IN my deſigns of pedeſtals*, I have repreſented them under the proportions obſerved by me in arches with pedeſtals; but when it is neceſſary to vary the general height, the meaſures of the particular members may eaſily be determined, by dividing the whole height in the Tuſcan order into $4\frac{1}{3}$ parts, in the Doric into $4\frac{4}{5}$, in the Ionic into $5\frac{2}{3}$, and in the Compoſite or Corinthian into ſix parts, making uſe of one of theſe parts as the module, and determining the heights and projections of the different members, according to the figures marked in the deſigns.

Of the APPLICATION *of the* ORDERS *of* ARCHITECTURE.

AMONG the ancients, the uſe of the orders was very frequent: many parts of their cities were provided with ſpacious porticos; their temples were ſurrounded with colonades; and their theatres, baths, baſilicas, triumphal arches, mauſoleums, bridges, and other public buildings, were profuſely enriched with columns; as were likewiſe the courts, veſtibules, and halls of their private villas and houſes.

IN imitation of the ancients, the moderns, have made the orders of architecture the principal ornaments of their ſtructures. We find them employed in almoſt every building of conſequence; where they are ſometimes merely ornamental, but at others, they are of real uſe as well as ornament; ſerving to ſupport the covering, or any other burdens placed upon them. On ſome occaſions, they are employed alone: the whole compoſition conſiſting only of one or more ranges of columns with their entablature. At other times the intervals between the columns are filled up, and adorned with arches, doors, windows, niches, ſtatues, bas-reliefs, and other ſimilar inventions: the columns are either placed immediately on the pavement, or raiſed on plinths, pedeſtals, or baſements; either engaged in the walls of the building, or ſtanding detached, near, or at ſome diſtance from them; and frequently, different orders are placed one above the other, or intermixed with each other on the ſame level. In all theſe, and in all other caſes, in which the orders are introduced; particular meaſures, rules, and precautions are to be obſerved, of which, I ſhall endeavour to give a full detail, in the following chapters.

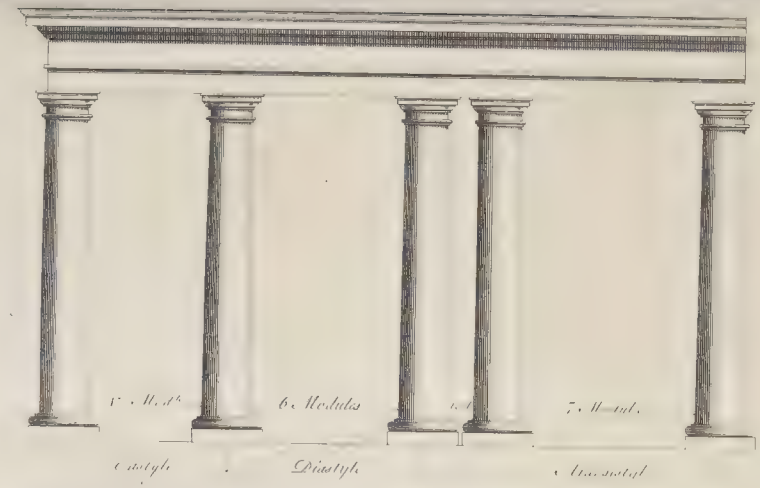
Of INTERCOLUMNIATIONS.

COLUMNS are either engaged, or inſulated: and when inſulated, they are either placed very near the walls, or at ſome conſiderable diſtance from them.

* See Pl. of Pilaſters.

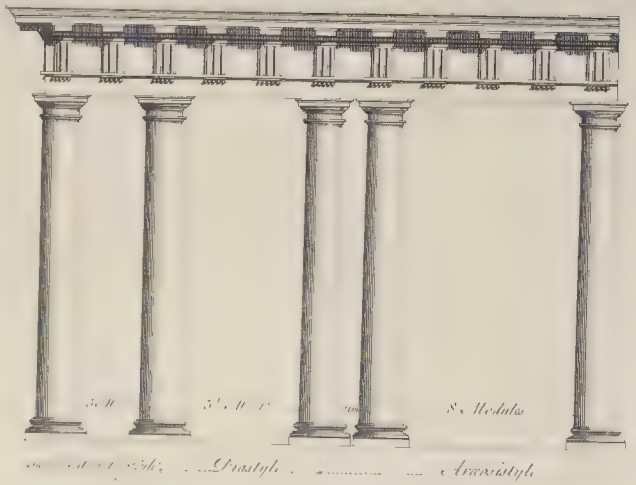
WITH

Tuscan



Intercolumniations

Doric



Ionic

Corinthian

WITH regard to engaged columns, or ſuch as are near the walls of a building, the intercolumniations are not limited; but depend on the width of the arches, windows, niches, or other objects and their decorations, placed within them. But columns that are entirely detached, and perform alone the office of ſupporting the entablature; as in periſtyles, porches, and galleries, muſt be near each other; both for the ſake of real and apparent ſolidity.

THE ancients had ſeveral manners of ſpacing their columns, which are deſcribed by Vitruvius in his third and fourth books. Thoſe practiſed in the Ionic and Corinthian orders, were the * Pycnoſtyle, of which the interval was equal to one diameter and a half of the column; the Syſtyle interval, of two diameters; the Euſtyle, of two diameters and one quarter; the Diaſtyle, of three diameters; and the Araeoſtyle, of four. In the Doric order they uſed other intercolumniations, regulating them by the triglyphs, of which one was always to be placed directly over the middle of each column: ſo that they were either ſyſtyle monotriglyph, of one diameter and a half; diaſtyle, of two diameters and three quarters; or araeoſtyle, of four diameters; and the Tuſcan intervals were exceedingly wide, ſome of them being above ſeven diameters: which, as the architraves were of wood, was practicable.

AMONG theſe different intercolumniations, the pycnoſtyle and ſyſtyle are too narrow: and though Mr. Perrault imagines, from their frequency in the remains of antiquity, that the ancients delighted more in them, than in any of the others, yet, I believe, their uſe muſt be aſcribed rather to neceſſity than to choice. For as the architraves were compoſed of ſingle ſtones or blocks of marble, extending from the axis of one column to that of another, it would have been difficult to find blocks of a ſufficient length for diaſtyle intervals, in large buildings.

WITH regard to the araeoſtyle and Tuſcan intercolumniations, they are by much too wide either for beauty or ſtrength, and can only be uſed in ruſtic ſtructures, where the architraves are of wood, and where convenience or economy takes place of all other conſiderations. Nor is the diaſtyle ſufficiently ſolid in large compoſitions. The euſtyle therefore, being a medium between the narrow and wide intervals, and at the ſame time being both ſpacious and ſolid, has been preferred by the ancients as well as moderns, to any of the reſt.

VITRUVIUS, in the ſecond chapter of his third book, ſays, that the thickneſs of the column ſhould be augmented, when the intercolumniation is enlarged; ſo that if, in a pycnoſtyle, the diameter is one tenth of the height, it ſhould in an araeoſtyle, be one eighth: for if, ſays he, in an araeoſtyle, the thickneſs of the columns do not exceed a ninth or tenth part of their height, they will appear too ſlender and delicate; whereas if, in a pycnoſtyle, the diameter of the column be equal to one eighth of its height, it will appear gouty, and diſagreeable to the eye.

* See Pl. of Intercolumniations.

THE intention of Vitruvius was good; but the means by which he attempts to compaſs it, are inſufficient. His deſign was to ſtrengthen the ſupports, in proportion as the intervals between them were enlarged; yet, according to the method propoſed by him, this cannot be effected: ſince one neceſſary conſequence of augmenting the diameter of the column, is enlarging the intercolumniation proportionably. Palladio and Scamozzi, have however, admitted this precept as literally juſt; and by their manner of applying it, have been guilty of a very conſiderable abſurdity.

IT is evident that Vitruvius, intended the five intercolumniations mentioned in his third book, merely for the Ionic and Corinthian orders; the latter of which, according to him, differed from the former, only in its capital. For, in the ſecond and ſeventh chapters of his fourth book, he eſtabliſhes other intervals for the Doric and Tuſcan orders. Nevertheleſs, they have employed theſe intercolumniations in different orders. Palladio, has uſed the ſyſtyle in the Corinthian, and the araeoſtyle in the Tuſcan; by which means the Corinthian periſtyle, of which the character ſhould be extreme delicacy and lightneſs, becomes twice as ſtrong and material as the Tuſcan; of which the diſtinguiſhing characteriſtic ought to be extreme ſolidity: and Scamozzi has fallen into the ſame error, though not to ſo great an exceſs; his Tuſcan intercolumniation being only diaſtyle.

IT may perhaps be alledged, in favour of this precept of Vitruvius, that, by following his doctrine, the ſolidity of the column is increaſed or diminiſhed in a greater degree, than the breadth of the interval; the difference of the latter, between columns of eight or ten diameters in height, being only as eighty to one hundred; whereas that of the former is as ſixty-four to one hundred. But the apparent magnitudes of cylindrical bodies viewed in a vertical poſition, are to each other, nearly in the ſame ratio as their diameters, not as their ſolid contents: and as the bulk of the architrave and other parts of the entablature, vary exactly in the ſame proportion as that of the column does, the real ſtrength of the ſtructure is not in the leaſt affected by it.

VIGNOLA has obſerved nearly one and the ſame proportion in all his intercolumniations: which practice, though condemned by ſeveral eminent writers, is certainly preferable to any other; as it anſwers perfectly the intention of Vitruvius, preſerves the character of each order, and maintains in all of them an equal degree of real ſolidity.

SETTING therefore aſide the pycnoſtyle and ſyſtyle diſpoſitions, on account of their want of ſpace; and the araeoſtyle, for its deficiency in point of ſtrength; it may be eſtabliſhed, that the diaſtyle intercolumniation, and the euſtyle, (of which the latter ought, on moſt occaſions, to have the preference,) may be employed without diſtinction, in all the orders, excepting the Doric; in which the moſt perfect interval is the ditriglyph; neither the monotriglyph, nor the araeoſtyle, being to be admitted, but in caſes of neceſſity.

IT is however to be obſerved, that if the meaſures of Vitruvius be ſcrupulouſly adhered to, with regard to the euſtyle interval, the modillions in the Corinthian and Compoſite cornices, and the dentils in the Ionic, will not come regularly over the middle of each column. The ancients, generally ſpeaking, were indifferent about theſe little accuracies: but the moderns, taking example by ſome of the chaſteſt remains of antiquity, have with reaſon, ſtrictly attended to them. A trifling alteration will remedy this defect, and being attended with no inconveniency, it may without heſitation be allowed. I ſhall therefore, in imitation of Vignola, inſtead of two diameters and a quarter, give two diameters and one third to the euſtyle intercolumniation; not only in the Ionic, Corinthian, and Compoſite orders, but likewiſe in the Tuſcan: for I would endeavour to ſimplify the art, and avoid an unneceſſary increaſe of rules, in a ſcience already too much encumbered with them.

SOMETIMES, on account of the windows, doors, niches, or other decorations, which correſpond with the intercolumniations in the periſtyle or gallery; it is not poſſible to make the intervals ſo narrow as euſtyle, or even as diaſtyle: wherefore the moderns, authoriſed by ſome few examples of antiquity, where grouped columns are employed; have invented a manner of diſpoſing them, by Perrault called Araeoſyſtyle; which admits of a larger interval, without any detriment to the apparent ſolidity of the building. This kind of diſpoſition is compoſed of two ſyſtyle intercolumniations; the column that ſeparates them, being approached towards one of thoſe at the extremities; ſufficient room being only left between them, for the projection of the capitals: ſo that, the great ſpace is three diameters and a half wide; and the ſmall one, only half a diameter.

THIS manner has been applied with ſucceſs on the porch of St. Paul's in London, and on the principal front of the Old Louvre in Paris: the decorations of the niches in the laſt of theſe buildings, having required ſuch wide intercolumniations, that they could never have been tolerated without coupled columns.

MR. BLONDEL in his *Cours d'Architecture*, employs ſeveral chapters of his firſt book, part 3, to prove the abſurdity of the araeoſyſtyle diſpoſition. His principal objections are its want of real ſolidity; its great expence, (ſince near double the quantity of columns are required, that would be ſufficient in the diaſtyle;) and the irregularities which it occaſions in the Doric, Corinthian, and Compoſite entablatures.

THESE objections are too conſiderable not to deſerve attention; and it will always be beſt to avoid the grouping of columns. Nevertheleſs, if on any occaſion, either to humour the fancy of ſome capricious patron, or to conquer ſome other inſurmountable difficulty, it ſhould be found neceſſary to introduce them, they may doubtleſs be employed; care however, being taken, to uſe ſuch precautions as will render the irregularities, occaſioned by this diſpoſition, leaſt ſtriking and diſagreeable.

IN the Tuſcan, or Ionic orders, no precautions will be found neceſſary; the entablature in the former of theſe being entirely plain, and in the latter only enriched with dentils, which admit of a regular diſtribution, in all intervals diviſible by thirds of modules. But in the Corinthian and Compoſite, it muſt be obſerved, that if the modillions are regularly diſpoſed, and ſpaced according to their juſt meaſures, they will neither anſwer in the large or little intercolumniation, ſo as to have one of them over the middle of each column.

TO remedy this defect, Perrault, the architect of the periſtyle of the Louvre, has enlarged both the modillions and the ſpaces between them; the diſtance from one center to another, in the broad intervals, being one module, thirteen minutes; and in the narrow ones, one module, fifteen minutes. This method, though tolerable in that building, where the dentil-band is not cut, and the angles are terminated by undiminiſhed pilaſters, will not anſwer in moſt other caſes: for, either the whole cornice muſt be enlarged, and all its proportions changed, or the modillions will not fall regularly over the dentils; the coffers in the ſoffit will be oblong inſtead of ſquare; and the ſpace between the laſt modillion and that over the angular column, will be leſs by far than any of the others: all which are irregularities too great to be tolerated.

THE ſimpleſt and beſt manner of proceeding, is to obſerve a regular diſtribution in the entablature, without any alteration in its meaſures; beginning at the two extremities of the building: by which method the modillions will anſwer to the middle of every other column, and be ſo near the middle of the intermediate ones, that the difference will not eaſily be perceivable. The only inconvenience ariſing from this practice is, that the three central intercolumniations of the compoſition will be broader, by one third of a module, than is neceſſary for eleven modillions: but this is a very trifling difference, eaſily divided, and rendered imperceptible, if the extent be any thing conſiderable.

IN the Doric order, grouped columns are not ſo eaſily managed; and though they have been employed in many conſiderable buildings, and by eminent architects, yet, in very few of them, have they been properly treated. At the church of St. Gervais, and ſeveral other buildings in Paris, the metope between the coupled columns is much broader than any of the others; at the Minims near the *Place Royale*, that the metope might be ſquare, the baſes of the columns are made to penetrate each other; at the caſtle of Vincennes, the height of the frize is conſiderably augmented for the ſame reaſon: and Scamozzi, wherever he joins together two Doric columns, or pilaſters, omits the baſe of one of them, ſubſtituting a plinth in its place; that ſo the interval may not be too broad to admit of a regular metope.

NONE of theſe methods are good, nor equal to that which Palladio has practiſed at the palace of Count Chiericato, and in the Baſilica at Vicenza. In the latter of theſe, the interval between the coupled columns is twenty-one minutes only: ſo that the diſtance, from the axis of one column to that of the other, is

two

two modules, twenty-one minutes; or ſix minutes more than is ſufficient, for a regular metope and two half triglyphs. In order to hide this exceſs, each of the triglyphs is thirty-one minutes broad, their centers are each of them removed one minute within the axis of the column, and the metope, is three minutes broader than the others. A difference ſo trifling, that it cannot be perceived without great difficulty: more eſpecially as the next metopes to the wide one, become, by the removal of the triglyphs abovementioned, each one minute wider than the reſt in the compoſition.

WHEN, therefore, grouping of columns cannot be avoided in the Doric order; the Attic baſe of Palladio muſt be employed, on account of its ſmall projection; the great interval muſt be aræoſtyle, and the ſmall one, twenty-one minutes, which leaves a ſpace of one minute between the plinths of the coupled columns.

IN periſtyles, galleries, or porticos, all the intercolumniations muſt be equal: but in a logia, or a porch, the middle interval may be broader than the others, by a triglyph; a couple of modillions; or three or four dentils: unleſs, the columns at the angles, be either coupled; or grouped with pilaſters; in which caſes, all the other intervals, ſhould be of the ſame dimenſion. For when they are of different widths, as at the Sorbonne; and the College Mazarin in Paris; it creates confuſion, and the unity of the compoſition ſuffers thereby.

BLONDEL obſerves, that, when periſtyles or colonades are compoſed of more than one row of columns, as are thoſe of the piazza of St. Peter's at Rome; they ſhould neither be of circular nor polygonal figures, but continued, as much as poſſible, in ſtraight lines: becauſe in either of the former caſes, the regular diſpoſition of the columns, is only perceivable from the center of the figure; the whole appearing, from all other points, a diſagreeable heap of confuſion. This remark is very juſt; I have frequently obſerved and regretted, the bad effect of a circular diſpoſition in the abovementioned magnificent ſtructure; where the four ranges of columns of which the colonades are compoſed, offer nothing but confuſion to the ſpectator's eye from every point of view.

THE ſame inconveniency, though in a ſmaller degree, ſubſiſts with regard to engaged pilaſters, or half columns; placed behind the detached columns, of ſingle, circular, oval, or polygonal periſtyles; as may be ſeen in thoſe of Burlington-Houſe. Wherefore, in buildings of that kind, it will perhaps be beſt, to decorate the back-wall of the periſtyle with windows or niches only.

WHEN buildings are to be executed on a ſmall ſcale, as is frequently the caſe of temples, and of other inventions, uſed for the ornament of gardens; it will be found neceſſary to make the intercolumniations, or at leaſt the central one, broader, in proportion to the diameter of the columns, than uſual; for when the columns are placed nearer each other than three feet, there is not room for a fat perſon to paſs between them.

Of ARCADES *and* ARCHES.

ARCHES, though not ſo magnificent as colonades; are ſtronger, more ſolid, and leſs expenſive. They are proper for triumphal entrances, gates of cities, of palaces, of gardens, and of parks; for arcades or porticos round public ſquares, markets, or large courts: and in general, for all apertures that require an extraordinary width. In Bologna, and ſome other cities of Italy, the ſtreets are on each ſide, bordered with arcades, like thoſe of Covent-Garden and the Royal Exchange; which add greatly to their magnificence. In hot or rainy climates, theſe arcades are exceedingly convenient to paſſengers, affording them both ſhade and ſhelter; but on the other hand, they are a great nuiſance to the inhabitants, as they darken their apartments, hinder a free circulation of air, and ſerve to harbour idle and noiſy vagabonds, who croud their entrances, and diſturb their quiet. At Rome, the courts of the Vatican, thoſe of Monte Cavallo, of the Borgheſe, and of many other palaces, are likewiſe ſurrounded with arcades, where the equipages and domeſticks attend under cover: ſome of them being ſufficiently ſpacious, to admit two or three coaches abreaſt. Such conveniences would be very uſeful in this metropolis; particularly, contiguous to the Court, to the Houſes of Parliament, to churches, to all places of publick amuſement, and even to moſt town habitations of the nobility and principal gentry, where numerous fine equipages and valuable horſes ſtand half the night, expoſed to all weathers. But the ſcarcity and prodigious value of ground in the faſhionable or commercial parts of the town, render them, in general, inattainable.

THERE are various manners of decorating arches: ſometimes their piers are ruſticated; at others they are adorned with pilaſters, columns, terms, or Caryatides; and on ſome occaſions, they are made ſufficiently broad to admit niches, or windows. The circular part of the aperture is either ſurrounded with ruſtic arch ſtones, or with an archivolt, enriched with mouldings; which in the center, is generally interrupted by a key ſtone in form of a conſole, a maſk, or ſome other proper ornament of ſculpture; ſerving, at the ſame time, as a key to the arch, and as a ſeemingly neceſſary ſupport to the architrave of the order. Sometimes the archivolt, ſprings from an impoſt placed at the top of the pier, and at others from columns with their regular entablature or architrave cornice, placed on each ſide of the arch; and there are ſome inſtances of arcades without any piers; the arches being turned from ſingle or coupled columns; ſometimes with, ſometimes without entablatures: as in the temple of Faunus at Rome, and at the Royal Exchange in London; which, however is a practice, ſeldom to be imitated; being neither ſolid nor handſome.

WHEN arches are large, the key ſtone ſhould never be omitted, but cut into the form of a conſole, and carried cloſe up under the ſoffit of the architrave; which, by reaſon of its extraordinary length of bearing, requires a ſupport in the middle. And if the columns that adorn the piers, are detached, as in the triumphal arches

at

at Rome, it is neceſſary to break the entablature over them; making its projection in the interval no more, than if there were no columns at all: for, though the architrave might be made ſufficiently ſolid, yet it would be diſagreeable to ſee ſo great a length of entablature hanging in the air, without any prop or apparent ſupport.

IT is, however, to be remembered, that theſe breaks in entablatures ſhould be very ſparingly employed, never indeed, but to avoid ſome conſiderable inconveuience or deformity: for they are unnatural, render the columns or other ſupports, apparently uſeleſs, deſtroy in a great meaſure, the ſimplicity of the compoſition, and can ſeldom be contrived without ſome mutilations, or ſtriking irregularities, in the capitals and cornices of the orders, as may be obſerved in ſeveral parts of the inſide of St. Paul's in this city, and in many other places.

THE impoſts of arches ſhould never be omitted; at leaſt, if they are, a plat-band ought to ſupply their place. And when columns are employed without pedeſtals in arcades, they ſhould always be raiſed on plinths; which will ſerve to keep them dry and clean, prevent their baſes from being broken, and improve the proportions of the arches; particularly in the Doric order, where the intercolumniations being governed by the triglyphs, are rather too wide for a well proportioned arch. In all arches it is to be obſerved, that the circular part muſt not ſpring immediately from the impoſt, but take its riſe at ſuch a diſtance above it, as may be neceſſary to have the whole curve ſeen at the proper point of view. When archivolts are employed without a key, or conſole, in their middle, the ſame diſtance muſt be preſerved between the top of the archivolt, and the architrave of the order, as when there is a key; or, at leaſt, half that diſtance: for when they are cloſe to each other, their junction forms an acute and diſagreeable angle.

THE void or aperture of arches, ſhould never be much more in height, nor much leſs, than double their width: the breadth of the pier ſhould ſeldom exceed two thirds, nor be leſs than one third, of the width of the arch; according to the character of the compoſition: and the angular piers, ſhould be broader than the reſt, by one half, one third, or one fourth. The archivolt and impoſt muſt be proportioned to the arch; due care being however taken, to keep them ſubſervient to the cornice, the architrave, and other principal parts of the order. For this reaſon the height of the impoſt, ſhould not be more than one ſeventh, nor need it ever be leſs than one ninth of the width of the aperture; and the archivolt muſt not be more than one eighth, nor leſs than one tenth, thereof. The breadth of the conſole or maſk, which ſerves as a key to the arch, ſhould at the bottom, be equal to that of the archivolt; and its ſides muſt be drawn from the center of the arch. The length thereof, ought not to be leſs than one and a half of its bottom breadth, nor more than double.

THE thickneſs of the piers, depends on the width of the portico, and the weight which the arcade has to carry above; for they muſt be ſtrong enough to bear the burthen, and to reſiſt the preſſure of the portico's vault. But, with regard to the beauty of the building, it ſhould not be leſs than one quarter of the width of the arch, nor more than one third. And when arches are cloſed up, to receive doors, windows, or niches, the receſſes ſhould be deep enough, at leaſt, to contain

the moſt prominent parts of what is placed in them; otherwiſe the architecture will appear flat, and the cornices of the niches, or windows, projecting before the fronts of the arches, will become too principal and ſtriking in the compoſition; as may be ſeen in the ſecond order of the Farneſe at Rome.

THESE dimenſions are general: but for a more accurate detail, the annexed deſigns * may be conſulted, where the proper meaſures of every part are expreſſed in figures.

VIGNOLA, in all his orders, excepting the Corinthian, makes the height of the arch double its width. His piers when the columns have no pedeſtals, are always three modules, and four modules when they have pedeſtals; his impoſts are all of them one module in height, and the archivolts are either one module, or half a module, as they belong to arches with, or without pedeſtals.

PALLADIO has given deſigns only of arches with pedeſtals. Their height is from one and two thirds, to two and a half of their width; and his piers are all of them, nearly three modules and three quarters; excepting in the Compoſite order, where they are four and four fifths.

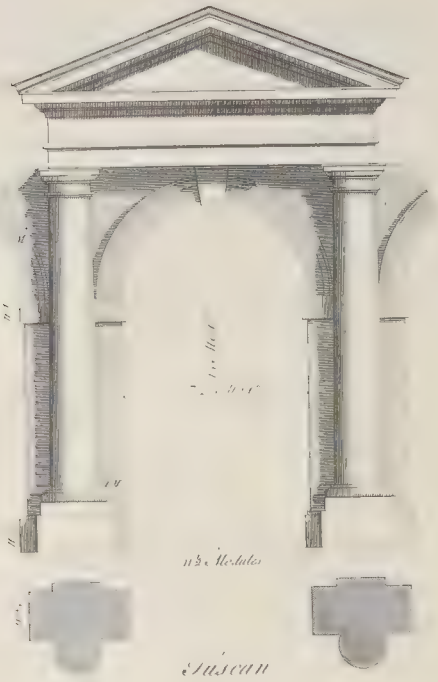
SCAMOZZI'S Tuſcan arch is, in height, ſomewhat leſs than double its width; which height he increaſes gradually, till, in the Corinthian arch with pedeſtals, it is nearly twice and one half the width. His piers diminiſh in proportion to the increaſe of delicacy in the orders: his Tuſcan pier in arches without pedeſtals, being four modules and a half; and his Corinthian only three modules and three quarters. In arches with pedeſtals, his Tuſcan pier is four modules and two thirds; and his Corinthian only four modules. His impoſts and archivolts are likewiſe varied; and their proportions are relative to the width of the arches and the height of the piers: ſo that they are conſiderably larger in arches with pedeſtals, than in thoſe without.

VIGNOLA'S arches, being all of the ſame proportion, do not characterize the difference of the orders. His piers, in arches without pedeſtals, are too narrow; and his archivolts too ſlight. In his Doric arch without pedeſtals, the diſtance between the arch and architrave of the order is too conſiderable; as it is indeed, in ſeveral others of his arches; and, in his Doric with pedeſtals, the piers are much too broad. Palladio makes too great a difference between the height of his arches. His Tuſcan and Doric are too low; his Corinthian and Compoſite much too high. His piers bear a greater proportion to the void of the arch, in the delicate orders, than in the maſſive. His archivolts are ſlender, his impoſts clumſy, and ill profiled. The apertures of Scamozzi's arches, are well proportioned; except in the Corinthian order; where they are, like Palladio's, of an exceſſive height. His piers bear a proper relation to the arches; as do likewiſe his impoſts and archivolts, excepting in the arches with pedeſtals; where they are much too predominant, in regard to the other parts of his compoſition: and the members of which they conſiſt, are larger than thoſe of the cornice of the order: a fault, which Palladio has likewiſe been guilty of, to a very great exceſs.

* See Plate of Arches.

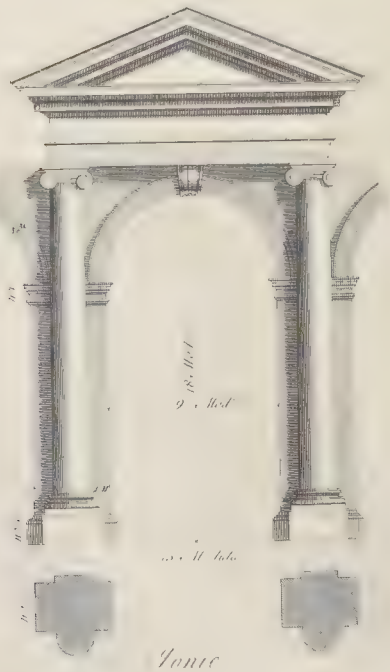
AT

Arches without Pedestals.



Tuscan

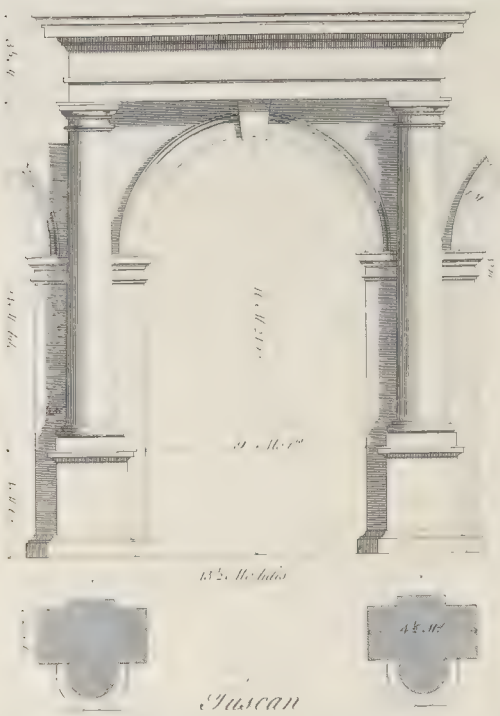
Doric



Ionic

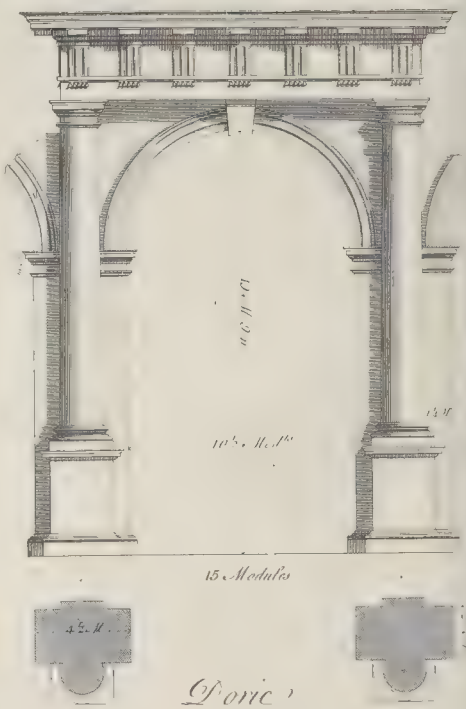
Corinthian

Arches with Pedestals.



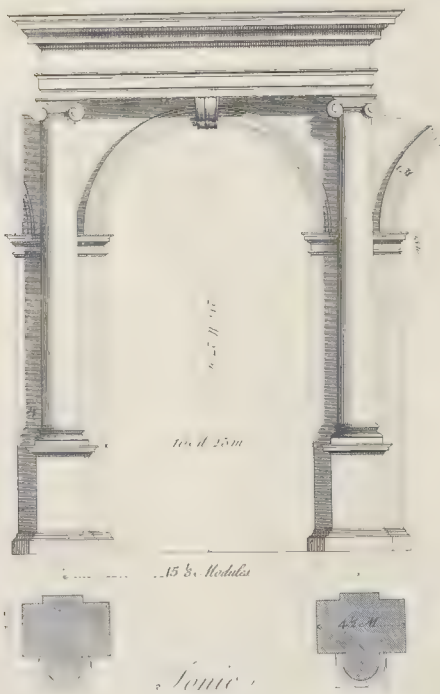
13½ Modules

Tuscan



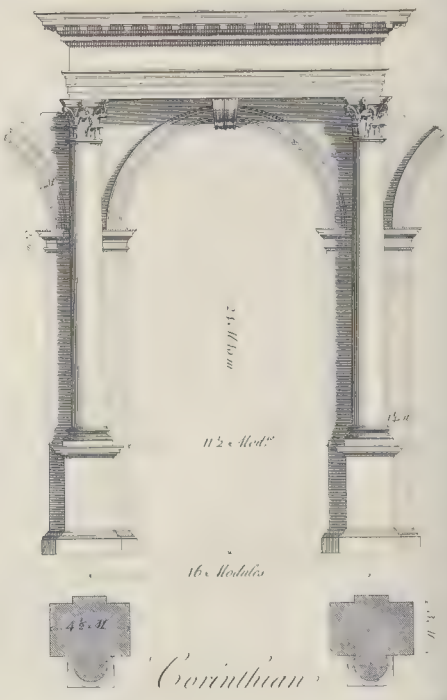
15 Modules

Doric



15½ Modules

Ionic



16 Modules

Corinthian

AT firſt ſight, it appears extremely reaſonable, to augment the ſize of the impoſts and archivolts of arches, in proportion to the increaſe of the aperture; and in caſes where no order is employed, it ought always to be done: but when the arches are, not only adorned with impoſts and archivolts, but are likewiſe ſurrounded with pedeſtals, columns, and entablatures; it muſt be very improper, to change conſiderably, the proportions of any one of theſe parts; while all the reſt remain unaltered; ſince the conſequence muſt be a conſiderable diſparity between them: ſo much the more ſtriking, as they are near each other, and of ſimilar natures; both circumſtances tending to facilitate a compariſon: while, a trifling diſproportion between the aperture of the arch, and its impoſt, or archivolt, will ſeldom be perceived; and never can be very diſpleaſing to the eye.

IN the annexed * plates are given deſigns of arches in all the orders, wherein it has been attempted to avoid the faults, with which the abovementioned maſters are charged. In the arches without pedeſtals, their height is made equal to the length of the column; which height, is, in the Tuſcan and Doric orders, ſomething leſs than double the width of the arch, and in the Corinthian or Compoſite, ſomething more than double. And in arches with pedeſtals, nearly the ſame proportion between the height and the width of the aperture is obſerved.

THE difference of width in the arches, (ſuppoſing the orders to be all of the ſame height,) not being conſiderable, I have conſtantly obſerved the ſame dimenſions; as well in the piers, as in the impoſts and archivolts; which is done to avoid a troubleſome and needleſs detail; the characters of the different orders being ſufficiently preſerved without it. For though the Corinthian pier, contains in width the ſame number of modules as the Tuſcan; yet, as theſe modules diminiſh, in proportion to the increaſe of delicacy in the orders, the real ſize of the one, is to that of the other, only as ſeven to ten.

IN the Doric order, the diſtribution of the frize, makes it difficult to proportion the apertures of the arches well; either with, or without pedeſtals: for the intervals of three or four triglyphs are too narrow, and thoſe of four and five are rather too wide. Palladio, to conquer that difficulty, has at the Carita in Venice, omitted the uſual ornaments of the frize; and introduced, inſtead of them, an imitation of thoſe on the frize of the Sybil's Temple at Trivoli: having at the ſame time made the diſtance between the axis of the columns only eleven modules and a half, inſtead of twelve and a half; which was the regular meaſure. Le Clerc, in his deſigns of the Doric order, has diminiſhed the breadth of the metopes and triglyphs; and Scamozzi, has made his Doric columns ſeventeen modules high, inſtead of ſixteen, their uſual dimenſion, and raiſed them on plinths; which laſt expedient, Sangallo has likewiſe made uſe of, in the lower order of the Farneſe at Rome.

IN imitation of Sangallo, I have, in the Doric arch without pedeſtals, raiſed the columns on plinths; but avoided augmenting their height, as I did not incline

* See Plates of Arches without and with Pedeſtals.

to change the eſtabliſhed proportions of the order, where there appeared ſo little occaſion for it. However, if the lowneſs of the arch ſhould be objected to, it may eaſily be remedied, either by increaſing the height of the column, as Palladio has done in his arch with pedeſtals, or by diminiſhing the breadth of the metopes and triglyphs, according to Le Clerc's method, or by employing both theſe artifices together: which laſt, ſhould be preferred; as it renders the change in the proportions of each particular part, leſs conſiderable.

THE ſame expedients may be uſed in changing the meaſures of the Doric arch with pedeſtals, if they ſhould not pleaſe; obſerving always, to divide the alteration proportionably, between the pedeſtal, the column, and the frize of the order: by which means the height of the aperture may be brought to double its width, without apparent detriment to any other part: for many things, which in the ſtrictneſs of theory appear licentious, are in reality of little or no conſequence in the execution; becauſe they are not eaſily perceptible.

THE proportions of the Tuſcan arch may likewiſe be changed, if required, and the height of the aperture be made nearer to double its width; which, as there are neither modillions nor dentils in the cornice, may be done without changing the proportion of any part of the order.

SHOULD the breadths, which I have given to the piers of all the abovementioned arches, though they ſeem to me well proportioned, be thought too conſiderable; they may be diminiſhed, and, in arches without pedeſtals, be reduced to three modules and three quarters, like thoſe of Palladio; obſerving in ſuch caſe, to reduce the archivolts to twenty-ſix minutes, inſtead of the thirty, which they have in the annexed deſigns. The piers of arches with pedeſtals may likewiſe be leſſened, and, inſtead of four modules and a half, be only four in breadth; which may be done without changing the dimenſions of the archivolts: nor need, in either of the caſes, the impoſts of any of the arches be altered.

WHEN columns are engaged in the piers, their projection depends on that of the impoſt, of which the moſt prominent part, ſhould be in a line with the axis of the column; at leaſt in the Tuſcan and Doric orders: but in the Ionic, Compoſite, and Corinthian, it may project ſomewhat beyond the axis, as in the Redentore at Venice, one of Palladio's beſt works: becauſe, when the columns in theſe orders, are diſengaged much above the half of their diameter, it occaſions very diſagreeable mutilations in the capitals; as may be obſerved in the porch of St. George's, Bloomſbury, and at the Banquetting-Houſe, Whitehall.

IN proportion to the increaſe of delicacy in the orders, I have increaſed the thickneſs of the piers; in each, a quarter of a module. Scamozzi's rule is quite oppoſite to this: for he diminiſhes his piers in thickneſs as well as in breadth, in the delicate orders; by which practice the real ſolidity of the ſtructure is much affected: more particularly, as the columns, which may be conſidered as parts of the piers, or as their abutments, are much weaker, in the Compoſite and Corinthian, than they are in the Tuſcan or Doric orders: whereas, according to the method here obſerved, the ſolidity of all the piers, is nearly the ſame; a circumſtance, of far more conſequence, than any trifling diſproportion between the thickneſs

Various Sorts of Arcades, taken from different Buildings at Rome, and in other parts of Italy.

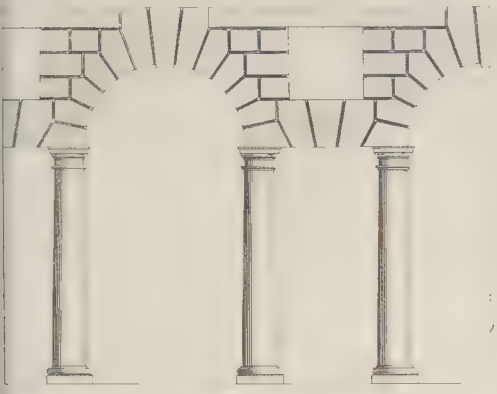


Fig 1.

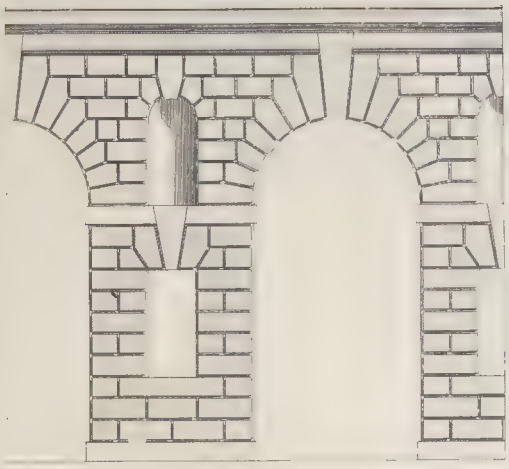


Fig 2

Fig 3.

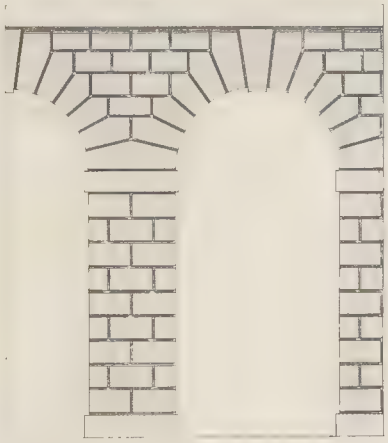


Fig 4

Fig 5.

Fig 6

thickneſs of the pier, and the diameter of the column; which can ſeldom be diſcovered, and never without a nicer inſpection than can take place, in obſerving the general effect of any compoſition.

WITH regard to the interior decoration of arcades, the portico may either have a flat ceiling, or be arched in various manners. When the ceiling is flat, there may be on the backs of the piers pilaſters; of the ſame kind and dimenſions, with the columns on their fronts; facing which pilaſters, there muſt be others like them, on the back wall of the portico. Their projection, as well as that of thoſe againſt the back of the piers, may be from one ſixth to one quarter of their diameter. Theſe pilaſters, may ſupport a continued entablature; or one interrupted, and running acroſs the portico over every two pilaſters, in order to form coffers. Or the architrave and frize only may be continued, while the cornice alone, is carried acroſs the portico, over the pilaſters as before; and ſerves to form compartments in the ceiling: as is done in the veſtibule of the Maſſimi Palace at Rome, and in the great ſtable of the King's Mews, near Charing Croſs.

WHERE the portico is arched, either with a ſemi-circular, or elliptical vault, the backs of the piers, and the inner wall of the portico may be decorated with pilaſters, as is above deſcribed, ſupporting a regular continued entablature; from a little above which, the arch ſhould take its ſpring, that no part of it may be hid by the projection of the cornice. The vault may be enriched with compartments of various regular figures, ſuch as hexagons, octagons, ſquares, and the like, of which and their decorations, ſeveral examples are given among the deſigns for ceilings. But when the vault is groined, or compoſed of flats, circular or domical coves, ſuſtained on pendentives, the pilaſters may be as broad as are the columns in front of the piers; but they muſt riſe no higher than the top of the impoſt, the mouldings of which, muſt finiſh and ſerve them inſtead of a capital: from whence the groins and pendentives are to ſpring, as alſo the bands, or *arcs doubleaux* which divide the vault.

IN the third plate of arches are ſix different deſigns of arcades, all of them compoſed by celebrated maſters, and perfect in their kind. Fig. 1, though leſs ſo than the reſt, is notwithſtanding the invention of Serlio; who recommends that manner of arching, in caſes, where columns are already provided, (as it frequently happens in places abounding with antiquities,) of which the length is not ſufficient for the intended purpoſe. And he obſerves, that, where theſe arches are uſed, it will be neceſſary to ſecure them with ſtrong abutments at each end. The great aperture of this kind of arch, may be from four and a half, to five diameters of the column in width, and in height, double that dimenſion; the width of the ſmall aperture muſt never exceed two thirds of that of the large one, and its height is determined by the height of the columns. To me, it ſeems, that this ſort of diſpoſition might be conſiderably improved, by adding an architrave cornice, or an entablature to the column, by omitting the ruſticks, and by ſurrounding the arches with archivolts.

FIG. 2, is of Vignola's invention, and executed by him in the Cortile of the caſtle at Caprarola. The arches are, in height, ſomewhat more than twice their width; the diſtance from the arch to the top of the cornice, is equal to one

third of the height of the arch; the breadth of the pier, is equal to the width of the arch; and the aperture of the window, occupies nearly one third of that breadth. Fig. 3, is an invention of Bramante, and executed in the Garden of the Belvidere at Rome. The height of the arch, is a trifle more than twice its width; the breadth of the pier, is equal to the width of the arch; and being divided into twelve parts, two of them are given to the parts of the pier ſupporting the archivolts, four to the two columns, two to the intervals between the nich and the columns, and four to the nich. The height of the pedeſtal is half the diameter of the arch; the columns are ten diameters in height; and the height of the entablature, is one quarter of the height of the columns: the impoſt and archivolt are, each of them, equal to half a diameter of the column. Fig. 4, is very common in the works of Palladio, and has been often imitated by Inigo Jones. The height of the arch may be about twice its width, and the breadth of the pier ſhould never be leſs than one, nor more than two thirds, of the width of the arch. Fig. 5, is a deſign of Vignola, executed at Monte Dragone, a ſeat of the Princes Borgheſi, near Freſcati. The height of the arch is ſomething more than twice its width; and the breadth of the pier, including the columns that ſupport the arch, is a trifle leſs than the width of the arch itſelf. Fig. 6, is an invention of Palladio, and executed by him in the Baſilica at Vicenza. The moſt beautiful proportion for compoſitions of this kind is, that the aperture of the arch be in height twice its width; that the breadth of the pier do not exceed that of the arch, nor be much leſs; that the ſmall order be in height two thirds of the large columns; which height, being divided into nine parts, eight of them muſt be for the height of the column, and the ninth, for the height of the architrave cornice; two fifths of which, ſhould be for the architrave, and three for the cornice. The breadth of the archivolt, ſhould be equal to the ſuperior diameter of the ſmall columns, and the key-ſtone at its bottom, muſt never exceed the ſame breadth.

Of ORDERS *above* ORDERS.

WHEN two, or more orders are employed, and placed upon each other in a building; the laws of ſolidity require, that the ſtrongeſt ſhould be placed lowermoſt: wherefore the Tuſcan is to ſupport the Doric, the Doric the Ionic, the Ionic the Compoſite or Corinthian, and the Compoſite the Corinthian only.

THIS rule, however, has not always been ſtrictly adhered to: moſt authors place the Compoſite above the Corinthian; and we find it ſo diſpoſed in many modern buildings. There are likewiſe examples, where the ſame order is repeated; as at the theatre of Statilius Taurus, and the Coliſeum: and there are others, where an intermediate order is omitted, and the Ionic placed on the Tuſcan, or the Corinthian on the Doric. But none of theſe practices are regular. The firſt of them, is an evident treſpaſs againſt the rules of ſolidity, and ſhould never be imitated; the ſecond occaſions a tireſome uniformity; and the laſt cannot be effected without ſeveral diſagreeable irregularities. For if the diameter of the ſuperior order, be

be in the ſame proportion to that of the inferior, as if the ſucceſſion were regular; the upper order will be higher than the lower one; and if the diameter be leſſened, in order to diminiſh the height, the column will be too ſlender; the intercolumniation, which at beſt, becomes too wide, will be ſtill more enlarged; and the piers, if there be arches, will be conſiderably too broad. Beſides all which, the characters of the different orders will be much too oppoſite, to be employed in the ſame aſpect, without being connected by ſome preparatory decoration.

IN placing columns above each other, it is always to be obſerved, that the axis of all the columns muſt correſpond, and be in the ſame perpendicular line, at leaſt in front; in flank, they may or may not be ſo, as ſhall be moſt convenient; though it is certainly more regular, as well as more ſolid, to place them on a perpendicular line in flank likewiſe. At the theatre of Marcellus, the axis of the Ionic column, is almoſt a foot within that of the Doric one below it; which, as the columns are engaged, and the wall of the ſecond ſtory is conſiderably retracted, could not well be avoided: and in caſes of a ſimilar nature, where the ſolidity of the ſtructure is not affected by it, the ſame method may be taken; obſerving, however, never to make the retraction greater, than it is at the theatre of Marcellus; where the front of the plinth, in the ſecond order, is in a line with the top of the ſhaft in the firſt.

BUT wherever columns are detached, it will always be beſt to place them exactly over each other, that ſo the axis of all may form one continued perpendicular line: for then the ſtructure will be ſolid, which it cannot be, when the ſuperior column is placed conſiderably within the inferior one; as a great part of it can then have no other ſupport, than the entablature of the order below it. It is indeed true, that by ſo doing, the baſes of the upper order will have a falſe bearing in front, as well as on the ſides; but there being no poſſibility of removing this inconveniency on the ſides, it would be a matter of no conſequence to remove it in front, where it is ſcarcely perceptible.

VITRUVIUS, in the firſt chapter of his fifth book, ſays, that the columns in a ſecond ſtory ſhould be leſs than thoſe in a firſt by one quarter; for the inferior parts being moſt loaded, ought to be ſtrongeſt: and in the ſeventh chapter of the ſame book, he repeats the ſame precept; adding, that, if a third order, ſhould be placed upon a ſecond, its columns ought likewiſe to be leſs by one quarter than thoſe of the ſecond order. So that, according to this rule, the height of the column in the third order, would only be nine ſixteenths of that in the firſt: and, if the columns were placed on pedeſtals; which, according to him, muſt be leſs by one half in a ſuperior, than in an inferior order; the height of the pedeſtal and column, in the ſecond order; would be to their height in the firſt, as eleven to ſixteen; and the height of the pedeſtal and column, in the third order, would be to their height in the firſt, nearly as fifteen to thirty-two: that is, leſs by more than one half. And further, if three orders of detached columns thus proportioned, were placed one above the other, as, for inſtance, the Doric, Ionic, and Corinthian; and the lower intercolumniations were euſtyle, or of two diameters and one third; the ſecond intercolumniations would be araeoſtyle, or of four diameters; and the third would be nearly of ſix diameters and a half: a width of intercolumniation extremely unpleaſing to the eye, at any rate unſolid, and, according to Vitruvius's own

 doctrine,

doctrine, not practicable but where the architraves are made of timber. And if, in like manner, three orders of engaged columns were placed above each other, either alone, or on pedeſtals; and the lower intercolumniation, was of a proper width to admit a well proportioned nich, window, door or arch, it would be exceedingly difficult to decorate the ſecond intercolumniation, and abſolutely impoſſible to decorate the third; which though conſiderably wider than the firſt, would be no more than about half as high.

I SHALL not trouble the reader with the various opinions and practices of the modern architects, with regard to the proportion of orders placed above each other: the curious may conſult Blondel's cours d'architecture, where the greateſt part of them are enumerated, and their merits nicely weighed; the whole diſcuſſion being ſpun out, to the extent of ſeventy well filled folio pages. It will be ſufficient to obſerve, that Scamozzi's rule is univerſally eſteemed the beſt; being ſimple, natural, and attended with fewer inconveniences than any other. It is built upon a paſſage in the fifth book of Vitruvius, and imports, that the lower diameter of the ſuperior column, ſhould conſtantly be equal to the upper diameter, of the inferior one; as if all the columns were formed of one long tapering tree, cut into ſeveral pieces.

ACCORDING to this rule, the Doric column will be to the Tuſcan, as thirteen and one third to fourteen; the Ionic to the Doric, as fifteen to ſixteen; the Compoſite or Corinthian to the Ionic, as ſixteen and two thirds to eighteen; and the Corinthian to the Compoſite, as ſixteen and two thirds to twenty.

IN this progreſſion it appears, that when the Compoſite and Corinthian are employed together, the relations between them are more diſtant, than between any of the other orders. But this may be remedied by leſſening the diminution of the inferior column, making its upper diameter ſix ſevenths, or ſeven eights of the lower one, inſtead of five ſixths: though, to ſay the truth, the very beſt expedient will be, never to uſe theſe two orders in the ſame aſpect; for they are ſo much alike, that it differs little from a repetition of the ſame object.

IT may probably be objected, that the inferior orders, according to the abovementioned proportions, will not be ſufficiently predominant. But if both the orders are continued throughout the front, this is of no conſequence; there are many examples, where the difference between them is not greater, which yet ſucceed perfectly well, and are generally eſteemed. And if, the ſuperior order only ſubſiſts in the middle, or at the ends, as is often the caſe; then the parts of the inferior order, over which no ſuperior is placed, are generally finiſhed with a baluſtrade, levelling with the cills of the windows in the ſecond order; which unites with, and is ſufficient, to give a proper degree of predominance, to the lower part of the compoſition.

IN England there are few examples of more than two ſtories of columns in the ſame aſpect: and though in Italy, and other parts of Europe we frequently meet with three, and ſometimes more; yet it is a practice by no means to be recommended, or imitated: for there is no poſſibility of avoiding many ſtriking inconſiſtences; or of preſerving the character of each order, in the intercolumnial decorations.

decorations. Palladio has attempted it at the Carita in Venice; Sangallo in the Palazzo Farneſe at Rome; Ammannato in the Cortile of the Pitti at Florence: but all unſucceſsfully. It is even difficult to arrange two orders with any tolerable degree of regularity, for the reaſons already offered in the beginning of this chapter; which will remain in force, even when Scamozzi's rule is obſerved, though the relations between the heights of the different orders, are then leſs diſtant, than by any other method.

IN the firſt plate of orders above each other, I have given deſigns of double colonades in all the orders; which are ſo diſpoſed that the modillions, mutules, triglyphs, and other ornaments of the entablature, fall regularly over the axis of the columns, except in the Compoſite and Corinthian combination; where, in the euſtyle interval, the modillions of the ſecond cornice do not exactly anſwer. But the diſtance of the object from the ſpectator's eye, makes this irregularity leſs important; more eſpecially as a modillion will fall exactly over the axis of every third column. Nevertheleſs, if a ſcrupulous accuracy ſhould be required, the entablature may be augmented, and made full five modules high; by which means, the diſtribution will be perfectly regular.

AMONG the intercolumniations exhibited in the abovementioned plate, there are ſome in the ſecond orders extremely wide; ſuch as the Ionic interval, over the Doric araeoſtyle; the Compoſite and Corinthian intervals, over the Ionic and Compoſite araeoſtyles; which having a weak, meagre appearance, and not being ſufficiently ſolid, excepting in ſmall buildings, are ſeldom to be ſuffered, and ſhould ſeldom be introduced. The moſt eligible are, the euſtyle and diaſtyle for the firſt order; which produce nearly the diaſtyle and the araeoſtyle in the ſecond.

MANY architects, among which number are Palladio and Scamozzi, place the ſecond order of columns on a pedeſtal. In compoſitions conſiſting of two ſtories of arcades, this cannot be avoided; but in colonades it may, and ought: for the addition of the pedeſtal, renders the upper ordonnance too predominant; and the projection of the pedeſtal's baſe, is both diſagreeable to the eye, and much too heavy a load on the inferior entablature. Palladio, in the Barbarino Palace at Vicenza, has placed the columns of the ſecond ſtory on a plinth only; and this diſpoſition is beſt: the height of the plinth being regulated by the point of view, and made ſufficient to expoſe to ſight, the whole baſe of the column. In this caſe, the baluſtrade muſt be without either pedeſtals or half baluſters to ſupport its extremities; becauſe theſe would contract, and alter the form of the column; its rail, or cap, muſt be fixed to the ſhafts of the columns, and its baſe made to level with their baſes; the upper torus and fillet of the columns being continued in the interval, and ſerving as mouldings to the baſe of the baluſtrade. The rail and baluſters muſt not be clumſy: wherefore it is beſt to uſe double-bellied baluſters; as Palladio has done in moſt of his buildings, and to give to the rail, very little projection; that ſo, it may not advance too far upon the ſurface of the column, and ſeem to cut into it. In large buildings, the center of the baluſter may be in a line with the axis of the column: but in ſmall ones, it muſt be within it, for the reaſon juſt mentioned.

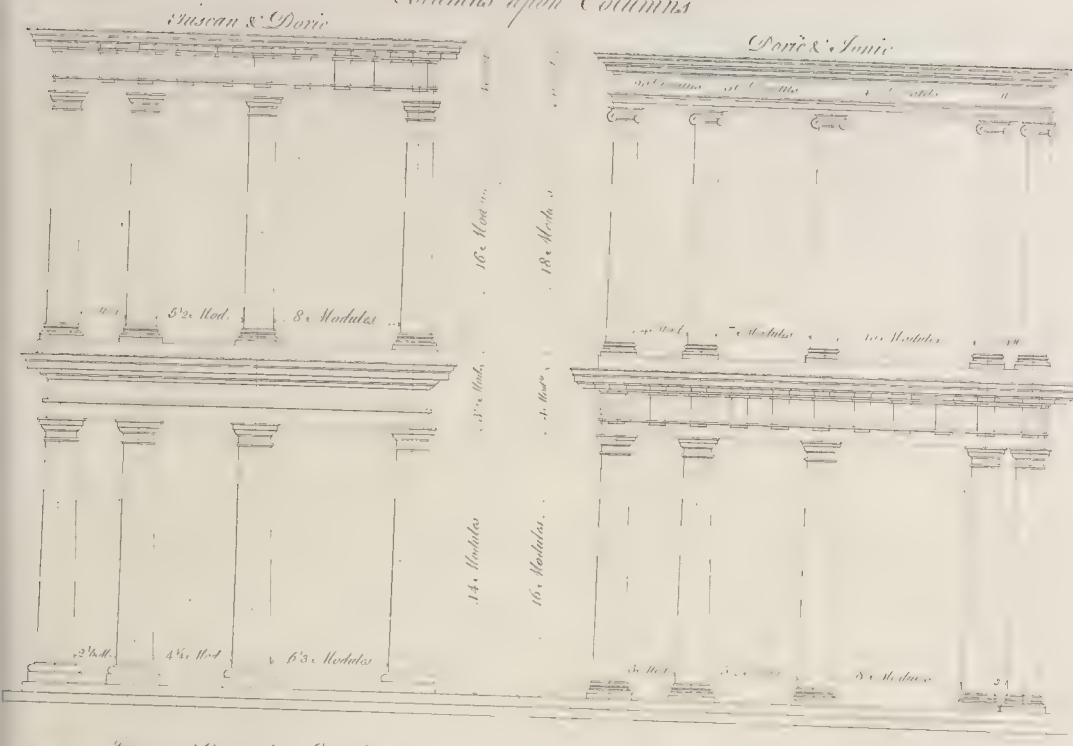
THE height of the baluſtrade is regulated, in a great meaſure, by its uſe; and cannot well be lower than three feet; nor ſhould it be higher than three and a half, or four feet. Nevertheleſs, it muſt neceſſarily bear ſome proportion to the reſt of the architecture, and have nearly the ſame relation to the lower order, or whatever it immediately ſtands upon, as when a baluſtrade is placed thereon, chiefly for ornament. Wherefore, if the parts are large, the height of the baluſtrade muſt be augmented; and if they are ſmall, it muſt be diminiſhed, as is done in the Caſino at Wilton, where it is only two feet four inches high, which was the largeſt dimenſion that could be given to it, in ſo ſmall a building. But that it might, notwithſtanding its lowneſs, anſwer the intended purpoſe, the pavement of the portico is ſix inches lower than the baſes of the columns, and on a level with the bottom of the plat-band that finiſhes the baſement.

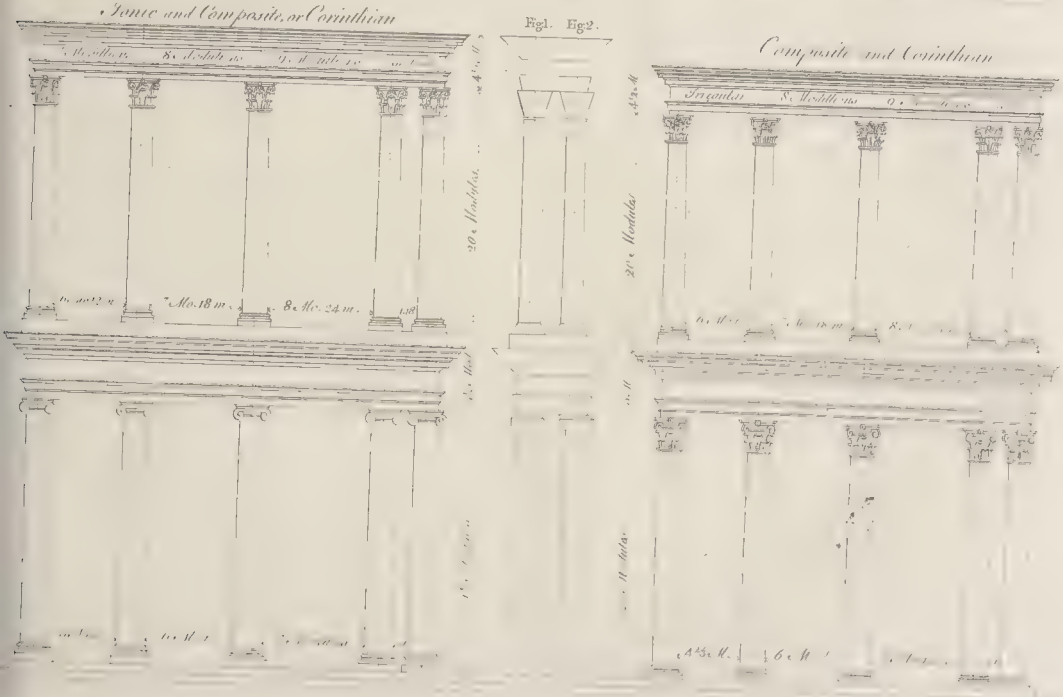
THE beſt, and indeed the only good diſpoſition, for two ſtories of arcades, is to raiſe the inferior order on a plinth, and the ſuperior one on a pedeſtal; as Sangallo has done at the Palazzo Farneſe: making both the ordonnances of an equal height, as Palladio has done at the Baſilica of Vicenza. In the ſecond plate of orders above each other, there are deſigns of arches upon arches for each order, which are perfectly regular, and well proportioned.

SCAMOZZI, in the thirteenth chapter of his ſixth book, ſays, that the arches in the ſecond ſtory ſhould not only be lower, but alſo narrower, than thoſe in the firſt; ſupporting his doctrine by ſeveral ſpecious arguments, and by the practice, as he ſays, of the ancient architects, in various buildings mentioned by him. In moſt of theſe however, the ſuperior arches are ſo far from being narrower, that they are either equal to, or wider than the inferior ones. In fact, his doctrine in this particular is very erroneous, entirely contrary to reaſon, and productive of ſeveral bad conſequences: for if, the upper arches be narrower than the lower ones, the piers muſt of courſe be broader; which is oppoſite to all rules of ſolidity whatever, and exceedingly ugly to the ſight. The extraordinary breadth of the pier on each ſide of the columns, in the ſuperior order, is likewiſe a great deformity: even when the arches are of equal widths, it is much too conſiderable. Palladio has, at the Carita in Venice, and at the Thieni Palace in Vicenza, made his upper arches wider than the lower ones; and I have not heſitated to follow his example: as by that means the weight of the ſolid in the ſuperior order is ſomewhat diminiſhed, the fronts of the upper piers bear a good proportion to their reſpective columns, and likewiſe to the reſt of the compoſition.

IN a ſecond ſtory of arcades, there is no avoiding pedeſtals. Palladio has indeed omitted them at the Carita: but his arches there, are very ill proportioned. The extraordinary bulk and projection of theſe pedeſtals are, as before obſerved, a conſiderable defect: to remedy which, in ſome meaſure, they have been frequently employed without baſes; as in the theatre of Marcellus, on the outſide of the Palazzo Thieni, and that of the Chiericato in Vicenza. This, however, helps the matter but little; and it will be beſt to make them always with baſes, of a moderate projection; obſerving at the ſame time, to reduce the projection of the baſes of the columns to ten minutes only, that the die may be no larger than is abſolutely

Columns upon Columns





abſolutely neceſſary, and in this caſe particular care muſt be taken, not to break the entablature over each column of the inferior order; becauſe the falſe bearing of the pedeſtal, in the ſecond order, will by ſo doing be rendered far more ſtriking, and in reality more defective; having then no other ſupport, than the projecting mouldings of the inferior cornice. There is no occaſion to raiſe the pedeſtals of the ſecond order on a plinth: for, as they come very forward on the cornice of the firſt order, and as the point of view muſt neceſſarily be diſtant, a very ſmall part only, of their baſes, will be hid from the eye.

THE baluſtrade muſt level with the pedeſtals ſupporting the columns; its rail or cornice, and baſe, muſt be of equal dimenſions, and of the ſame profiles, with theirs. It ſhould be contained in the arch, and ſet as far back as poſſible; that the form of the arch may appear diſtinct, and uninterrupted from top to bottom: for which reaſon likewiſe, the cornice of the pedeſtals muſt not return, nor profile round the piers, which are to be continued in ſtraight perpendicular lines, from the impoſts to the baſes of the pedeſtals. The back of the rail may either be made plain, or be ſunk into a pannel, in form of an open ſurbaſe, for ſo it will be moſt convenient to lean upon, and it ſhould be in a line with, or ſomewhat receſſed within the backs of the piers. The back part of the baſe of the baluſtrade, may be adorned with the ſame mouldings as the baſes of the piers; provided they have not much projection; but if that ſhould be conſiderable, it will be beſt to uſe only a plinth, crowned with the two upper mouldings, that ſo the approach may remain more free.

IN the Doric arch above the Tuſcan, I have reduced the entablature to three modules, twenty-two minutes; which was neceſſary, in order to have the arch well proportioned: and as its bearing is very conſiderable, this licence ſeems the more excuſable. The parts of the entablature have the ſame proportion to each other as uſual; the only difference being, that, inſtead of determining their meaſures by the module of the column, they muſt be determined by another module, made equal to one quarter of the height of the entablature. The pedeſtals and the baluſtrade are in this, as in the other arches, equal to the height of the entablature; which was done to preſerve the ſame general rule throughout: but as the entablature here bears a ſomewhat larger proportion to the column than in the other orders, the height of the baluſtrade is perhaps a trifle too conſiderable, and may therefore, if required, be reduced to two ninths of the column, as in the Ionic order; and what is thus deducted from the height of the entablature, may be added to the height of the column, which by that means will acquire a more elegant proportion.

I HAVE reduced the Ionic, Compoſite and Corinthian entablatures, in the ſecond orders, to two ninths of the height of their reſpective columns; and having allowed to each dentil with its interval, a breadth of nine minutes of the regular module of the column, the dentils and modillions anſwer exactly to almoſt all the intercolumniations. In the deſign of arches ſupported by columns, the ſmall order in the ſecond ſtory is a trifle lower than uſual; which cannot be avoided: for, if it be made two thirds of the large column, there will not be room above it for the circular part of the arch with its archivolt.

Of BASEMENTS *and* ATTICS.

INSTEAD of employing ſeveral orders one above the other in a compoſition, the ground floor, is ſometimes made in the form of a continued baſe; called a Baſement: on which the order that decorates the principal ſtory, is placed. The proportion of theſe baſements is not fixed, it depends on various circumſtances, but chiefly on the nature of the apartments compoſing the ground floor.

IN Italy, where their ſummer habitations are very frequently on that floor, the baſements are ſometimes very high. At the palace of the Porti in Vicenza, the height is equal to that of the order placed thereupon; and at the Thieni, in the ſame city, its height exceeds two thirds of that of the order, although it be almoſt of a ſufficient elevation, to contain two ſtories: but at the Villa Capra, and at the Loco Arſieri, both near Vicenza, the baſement is only half the height of the order; becauſe in both theſe, the ground floor conſiſts of nothing but offices.

IT will be ſuperfluous to cite more examples of the diverſity of proportions, obſerved by architects in this part of a building; as the four abovementioned, all of them eſtimable works of the great Palladio, will ſufficiently authoriſe any variations that it may be neceſſary to make. It will not, however, on any occaſion be adviſable to make the baſement higher than the order it is to ſupport: for the order being the richeſt object of the compoſition, and indicating the principal part in the fabrick, ought to be predominant. Beſides, when the grand apartment is raiſed too high, as is the caſe at Cazerta, where the aſcent exceeds a hundred ſteps; it loſes much of its importance, by the approach to it being rendered tediou, tireſome, and difficult. Neither ſhould a baſement be lower than half the height of the order, if it is to contain apartments, and conſequently have windows and entrances into it: for whenever that is the caſe, the rooms will be low, the windows and doors very ill formed, or not proportionate to the reſt of the compoſition, as is obſervable at Holkham: but if the only uſe of the baſement be to raiſe the ground floor, it need not exceed three, four, or at the moſt five or ſix feet in height; and be in the form of a continued pedeſtal.

THE uſual manner of decorating baſements is, with ruſtics of different kinds. The beſt, in buildings where neatneſs and finiſhing is aimed at, are ſuch as have a ſmooth ſurface. Their height, including the joint, ſhould never be leſs than one module of the order placed upon the baſement, nor much more: and their figure may be from a triple ſquare to a ſeſquialtera. The joints between them may either be ſquare or chamfered: the ſquare ones ſhould not be wider than one eighth of the height of the ruſtic, nor narrower than one tenth; and their depth muſt be ſomewhat leſs, or at moſt equal to their width. Of thoſe that have chamfered joints, the chamfer muſt form a rectangle, and the width of the whole joint may be from one fourth to near one third of the height of the flat ſurface of the ruſtic. In France we frequently ſee only the horizontal joints of ruſtics marked; the vertical ones being entirely omitted: and in Sir John Vanbrugh's works, the like is alſo very

very common: but it has in general, a bad effect, and ſtrikes as if the building were compoſed of boards, rather than of ſtone. Palladio's method ſeems far preferable, who, in imitation of the ancients, always marked both the vertical and horizontal joints; and whenever the former of theſe are regularly and artfully diſpoſed, the ruſtic work has a very beautiful appearance. I have in the courſe of the work given various deſigns of ruſtic baſements*, diſtributed in different manners, all which are collected from buildings of note.

THE baſement, when high, is ſometimes finiſhed with a cornice, as in the ſecond figure of the third plate of arches, and as in the Strand front of Somerſet-Place: but the uſual method is only to crown it with a plat-band, as in the fourth figure of the ſame plate; and as in the river front and ſquare of the ſame building: the height of which ſhould not exceed the height of a ruſtic with its joint, nor ever be lower than a ruſtic excluſive of the joint. The zocholo or plinth at the foot of the baſement, muſt at leaſt be of the ſame height with the plat-band, in general it ſhould be ſomewhat higher; and whenever there are arches in the baſement, the plat-band which ſupplies the place of the impoſt, muſt be of the ſame height as one of the ruſticks, excluſive of its joint; and where a cornice is introduced to finiſh the baſement, a regular moulded baſe to the ſame muſt alſo be introduced. To the height of the cornice may be given one ſeventeenth or eighteenth part of the whole baſement, and to that of the baſe about twice as much, divided into ſix parts; of which the lower five ſixths ſhould form the plinth, and the upper ſixth part, be compoſed of mouldings.

IT is ſometimes uſual, inſtead of a ſecond order to crown the firſt with an attick; as Palladio has done at the Porti and Valmarino Palaces, in Vicenza, and Inigo Jones at Greenwich-Hoſpital. Theſe atticks ſhould never exceed, in height, one third of the height of the order on which they are placed; nor ever be leſs than one quarter. Their figure is that of a pedeſtal. The baſe, dye, and cornice, of which they are compoſed, may bear the ſame proportions to each other as thoſe of pedeſtals do; and the baſe and cornice may be compoſed of the ſame mouldings, as thoſe of pedeſtals are. Sometimes theſe atticks are continued throughout, without any breaks; at other times parts project, and form pilaſters over each column or pilaſter of the order. The breadth of theſe pilaſters is ſeldom made narrower than the upper diameter of the column or pilaſter under them, nor ever broader. Their projection may be equal to one quarter of their breadth, or ſomewhat leſs; and their fronts are ſometimes adorned with pannels ſunk in and ſurrounded with mouldings, as they were on the front of Powis-Houſe; but this, on moſt occaſions, as it looks too like joiners work; ſhould be avoided as well as the capitals with which they are often adorned, particularly in France: becauſe they then approach too near the figure of regular pilaſters of the orders, and being much broader than theſe, in proportion to their height; always carry with them the idea of a ſtunted, clumſy, ill-proportioned compoſition.

* See Plate 3 of Windows, and Plate 3 of Arches.

Of PEDESTALS.

A PEDIMENT conſiſts of a horizontal cornice, ſupporting a triangular or curvilineal ſpace; either plain or adorned, called the Tympanum or Tympan; which is covered, either with two portions of ſtraight, inclined cornice; or with one curvilineal cornice, following the direction of its upper outline. At each end of theſe cornices and on their ſummit, are placed little plinths or pedeſtals, called Acroterions or Acroters, ſerving to ſupport the ſtatues, vaſes, or other ornaments, which are uſed to enrich, and to terminate the pediment gracefully.

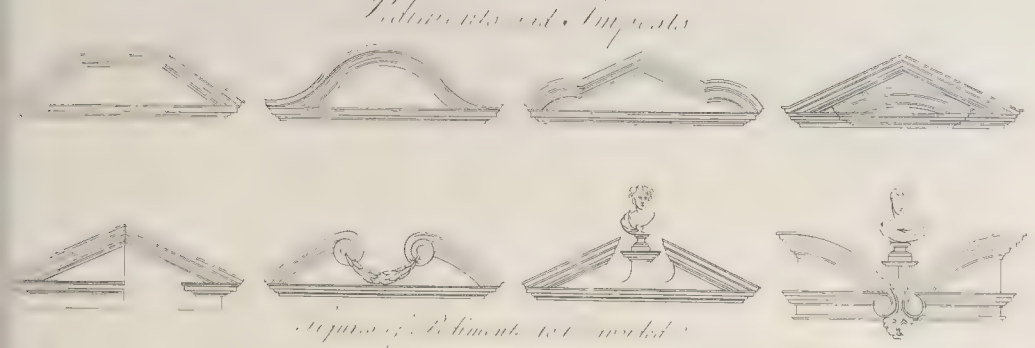
PEDIMENTS owe their origin, moſt probably, to the inclined roofs of the primitive huts. Among the Romans they were uſed only as coverings to their ſacred buildings; till Cæſar, obtained leave to cover his houſe with a pointed roof, after the manner of temples. In the remains of antiquity we meet with two kinds of them; viz. triangular and circular. The former of theſe are promiſcuouſly applied to cover ſmall or large bodies: but the latter, being of a heavier figure, are never employed but as coverings to doors, niches, windows, or gates; where the ſmallneſs of their dimenſions, compenſates for the clumſineſs of their form.

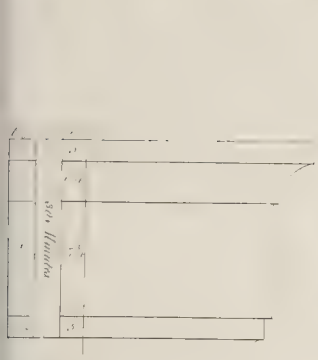
AS a pediment repreſents the roof, it ſhould never be employed but to terminate and finiſh the whole compoſition. Yet, in the churches of Rome and of Paris, we frequently ſee one uſed to finiſh the firſt order of a porch; another to finiſh the ſecond order; and ſometimes even a third or fourth above theſe: but this, however, is a practice which ſhould not be imitated. Licinius, the mathematician, anciently reprehended Apaturius, the painter, merely for repreſenting an abſurdity of this kind in a picture: for who, ſaid he, ever ſaw houſes and columns built upon the roofs and upon the tylings of other houſes? Beſides the inclined top of a pediment is, in appearance at leaſt, a very unſtable baſe for a range of columns or other heavy bodies.

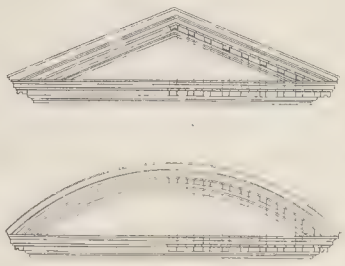
NOR is it more reaſonable to place two or three pediments one within another; as on one of the pavilions in the court of the Old Louvre at Paris, at St. Mary's in Campitelli, and at the church of the Great Jeſu at Rome: ſince the ſame building can certainly want but one roof, to cover it.

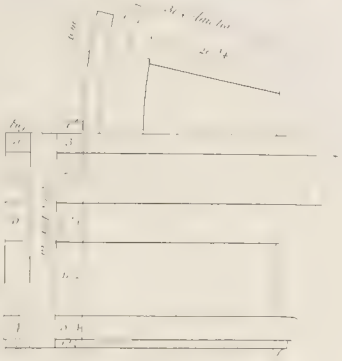
ON circular bodies, pediments ſhould never be applied, as at the church of St. Thomas in the Louvre at Paris; that kind of roof, being of a very improper conſtruction for covering circles; and far from pleaſing to the eye; as, in ſuch caſes, they appear in almoſt every view, contorted and irregular.

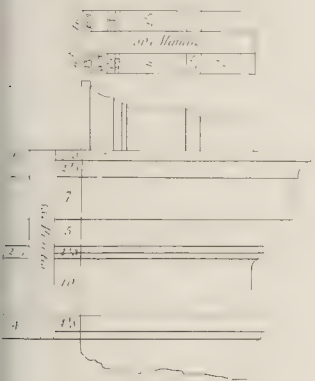
SOME writers there are, who object to pediments in interior decorations; becauſe, ſay they, where the whole is covered and encloſed, there can be no occaſion for coverings to ſhelter each particular part. In this, however, they ſeem to carry their reaſoning rather too far; a ſtep farther would lead them into the ſame road

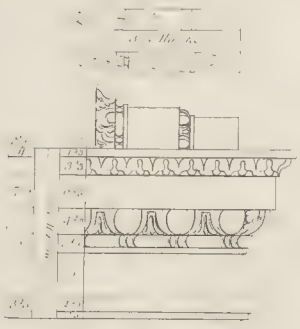


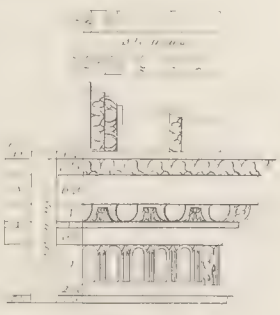


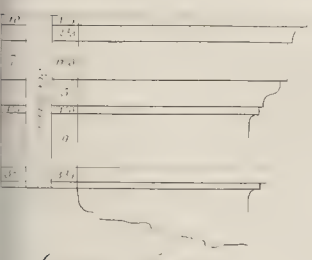


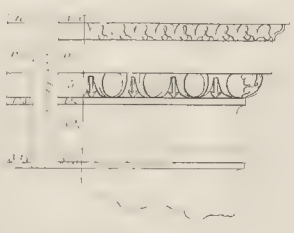


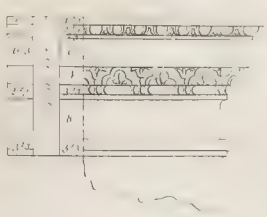












road with Father Laugier; who, having ſagaciouſly found out, that the firſt buildings conſiſted of nothing but four trunks of trees, and a covering; conſiders almoſt every part of a building, excepting the column, the entablature, and the pediment, as licentious or faulty; and in conſequence thereof, very cavalierly baniſhes at once all pedeſtals, pilaſters, niches, arcades, atticks, domes, &c. &c. It is only by ſpecial favour, that he condeſcends to tolerate doors, or windows, or even walls.

THERE are many favourers of this writer's ſyſtem, who, like him, concentrate all perfection in propriety. It were indeed to be wiſhed that ſome invariable ſtandard could be diſcovered, whereby to decide the merit of every production of the arts: but, certainly, Father Laugier has not hit the mark. Beauty and fitneſs, are qualities that have very little connection with each other: in architecture they are ſometimes incompatible; as may eaſily be demonſtrated from ſome of the Father's own ſingular compoſitions; with a deſcription of which, he has enriched his book. And there are many things in that art, which though beautiful in the higheſt degree, yet carry with them in their application, an evident abſurdity: one inſtance whereof is the Corinthian capital; a form compoſed of a ſlight baſket ſurrounded with leaves and flowers. Can any thing be more unfit to ſupport a heavy load of entablature, and ſuch other weights as are uſually placed upon it? yet this has been approved and admired ſome thouſand years, and will probably ſtill continue to be approved and admired, for ages to come.

LET it not be imagined, however, that it is by any means intended, entirely to lay aſide a regard to propriety; on all occaſions it muſt be kept in view: in things deſigned for uſe, it is the primary conſideration; and ſhould on no account whatever be treſpaſſed upon: but in objects merely ornamental, which are calculated to captivate the ſenſes, rather than to ſatisfy the underſtanding, it ſeems unreaſonable to ſacrifice other qualities more efficacious, to fitneſs alone.

THE rigid ancient artiſts, introduced but few pediments into their buildings; uſually contenting themſelves with a ſingle one, to diſtinguiſh and adorn the center or principal part of the ſtructure: but in the more licentious times of antiquity, as well as in modern practice, and particularly amongſt the Italians, ſuch has been the rage after pediments, that their buildings frequently conſiſt of almoſt nothing elſe. At Rome the fronts of moſt of their churches are covered with them; as are likewiſe many of their palaces and private houſes, where they are ſeen of all ſizes and figures. For, beſides the triangular and round, they have ſome compoſed of both theſe forms; ſome of an undulated figure; ſome ſemi-hexagonal; ſome with the inclined cornice and tympan open in the middle, to receive a vaſe, a buſt, a nich with a ſtatue, or a tablet for an inſcription; and others where the aperture is left void, and the two ends of the inclined cornice are finiſhed with a couple of volutes, or fleurons. There is likewiſe a ſort of pediment compoſed of two half pediments, which are not joined together to form a whole one, but reverſed; the ſummits being turned outwards. Of this kind there is one under the porticos of the Gallery of Florence, with a buſt wedged in between the two ſections. England is far from being free of theſe extravagances; the buildings of London exhibit many examples of each kind, which not to offend, I ſhall forbear to point out.

THE beam, being a neceſſary part in the conſtruction of a roof, it is an impropriety to intermit or retrench, the horizontal entablature of a pediment, by which it is repreſented; either to make room for a nich, as at St. John's, Weſtminſter; or for an arch, as in the cathedral church of St. Paul's; or for a window, as is cuſtomary in moſt of the new buildings in this city, where a ſemi-circular window is generally introduced, between the inclined cornice of the pediment and the aperture of the door, in order to gain light for the hall or paſſage: and this licence is ſo much the more reprehenſible, as it is extremely ugly; the two parts of the inclined cornice thus diſunited, as it were untied, and unſupported, always ſtriking the ſpectator, with the idea of a couple of leavers, applied to overturn the columns on each ſide. The making ſeveral breaks in the horizontal entablature, or cornice, of a pediment, as at the King's Mews near Charing Croſs, and on the pediments in the flanks of St. Paul's, is an impropriety of a ſimilar nature, and equally unpleaſing to the eye.

VITRUVIUS obſerves, that the Greeks never employed either modillions or dentils in the horizontal cornices of their pediments; both of them repreſenting parts in the conſtruction of a roof, which cannot appear in that view. This their practice, is obſervable in the temple of Minerva at Athens, and in ſome other building yet ſtanding in Greece; there is an ancient Roman inſtance of it, in the temple of Sciſi, mentioned by Palladio; and a modern one in the front of the Fueillants, near the Thuilleries at Paris, built by one of the Manſards.

ALL this is no doubt extremely proper, but at the ſame time, it is as ſurely extremely ugly. The diſparity of figure and enrichment, between the horizontal and inclined cornices, are ſuch defects, as cannot be compenſated by any degree of propriety whatever: and therefore, to me it appears beſt, in imitation of the greateſt Roman and modern architects, always to make the two cornices of the ſame profile; thus committing a trifling impropriety, to avoid a very conſiderable deformity.

IN regular architecture, no other form of pediments can be admitted beſides the triangular and round. Both of them are beautiful: and when a conſiderable number of pediments are introduced, as when a range of windows are adorned with them, theſe two figures may alternately be employed; as they are in the niches of the Pantheon at Rome, and in thoſe of the temple of Diana at Nimes.

IT is to be obſerved, that the two uppermoſt mouldings of the cornice are always omitted in the horizontal one of a pediment; that part of the profile being directed upwards, to finiſh the inclined cornices. This difference of direction, increaſes the height of the cyma very conſiderably, and makes it far too large for the other parts of the entablature: to obviate which, ſome architects have made a break in the cyma and fillet, as repreſented in the fourth figure, plate of pediments: but this being productive of a conſiderable deformity; it will always be better, whenever the whole object is covered with a pediment, to make the profile of the cyma lower than uſual; by which means it may, notwithſtanding the increaſe occaſioned by the difference of its direction, be made of a ſize ſuitable to the reſt of

of the cornice. But if the inclined cornice of the pediment be, on each ſide, joined to horizontal ones, as is the caſe when the middle pavilion or other projecting parts are flanked with buildings, the only good method of leſſening the abovementioned deformity, is to give very little projection to the cyma; by which means the increaſe in its height may be rendered very trifling.

THE modillions, mutules, dentils, and other ornaments of the inclined cornice, muſt always anſwer perpendicularly over thoſe of the horizontal cornice, and their ſides be always perpendicular to the horizon.

THE ancients judiciouſly avoided the introduction of different ſized pediments, in the ſame compoſition. Among the chaſte remains of antiquity, I do not recollect any example, even of two different ſizes in the ſame aſpect. Neither do we find that they ever adorned their niches, doors, or windows with pediments, when the whole front or any conſiderable part thereof, was covered with one; juſtly judging that the immenſe diſparity, between the principal pediment and thoſe that ſhould cover the parts, could not but produce a diſagreeable oppoſition, in the ſame manner as a pigmy and a giant, expoſed to view at the ſame time; are both made ridiculous by a compariſon.

THESE cautious proceedings of the ancient artiſts, are good leſſons to the moderns; which they would do well to have in memory, in all ſorts of compoſitions. For, wherever there is a conſiderable difference of dimenſion, in objects of the ſame figure, both will equally ſuffer by it: the largeſt will appear inſupportably heavy; the ſmalleſt ridiculouſly trifling: and wherever the difference of dimenſion is inconſiderable, it will always ſtrike the beholder as the effect of inaccuracy in the workmen, or of inattention in the contriver: as may be verified by inſpection of the arches in the baſement ſtory of the Horſe Guards towards St. James's Park.

THE proportion of pediments depends upon their ſize: for the ſame proportions will not ſucceed in all caſes. When the baſe of the pediment is ſhort, its height muſt be increaſed, and when long it muſt be diminiſhed. For, if a ſmall pediment be made low, the inclined cornice, which is always of the ſame height, whatever may be the dimenſion of the pediment, will leave little or no ſpace for the tympan; conſequently little or no plain repoſe, between the horizontal and inclined cornices. And if a large pediment be made high, it will have too lofty a tympan, and the whole compoſition will appear ſtraggling, and too heavy for that which is to ſupport it. The beſt proportion for the height, is from one fifth to one quarter of the baſe, according to the extent of the pediment, and the character of the body it ſerves to cover.

THE face of the tympan, is always placed on a line perpendicular with the face of the frize; and, when large, may be adorned with ſculpture, repreſenting the arms or cypher of the owner; trophies of various kinds, ſuited to the nature of the ſtructure; or bas-reliefs, either repreſenting allegorical or hiſtorical ſubjects: but when ſmall, it is much better left plain.

VITRUVIUS determines the height of the acroters, by the height of the tympan; and Scamozzi, by the projection of the cornice; giving to the dye as much height

as the cornice has projection. But neither of these methods are well founded; for, when the building is terminated by a balustrade, the pedestals of the balustrade serve for the side acroters, and that at the summit must be suited to them. But when there is no balustrade, the acroters must always be of a sufficient height, whatever that height may be; to expose to view the whole statue, or vase, or other ornaments placed upon them, from the proper point of sight for the building.

Of BALUSTRADES.

BALUSTRADES are sometimes of real use in building, and at other times they are merely ornamental. Such as are intended for use; as when they are employed on steps or stairs, before windows, or to enclose terrasses, or other elevated places of resort; must always be nearly of the same height: never exceeding three feet and a half, nor ever being less than three. That so a person of an ordinary size may, with ease, lean over them, without being in danger of falling. But those that are principally designed for ornament, as when they finish a building; or even for use and ornament, as when they enclose the passage over a large bridge; should be proportioned to the architecture they accompany: and their height ought never to exceed four fifths of the height of the entablature on which they are placed; nor should it ever be less than two thirds thereof, without counting the zocholo, or plinth: the height of which, must be sufficient to leave the whole balustrade exposed to view, from the point of sight for the building. Palladio has in some of his works, made the height of the balustrade equal to that of the whole entablature; and Inigo Jones has followed his example in many of his buildings; particularly at the Banquetting House: where besides this extraordinary loftiness, it is raised on a very high plinth. I do not think, either of these great artists, are to be imitated in this practice, as it renders the balustrade much too predominant, and very prejudicial to the effect of other parts in the composition; particularly of the entablature to which it is contiguous.

THERE are various figures of balusters; the most regular of which are delineated in the annexed plate. The handsomest are the three in the first row: their profiles and dimensions are all different. The simplest of them, may serve to finish a Tuscan order; and the others may be employed in the Doric, Ionic, Composite, or Corinthian orders; according to their degrees of richness.

THE best proportion for balustrades of this kind, is to divide the whole given height into thirteen equal parts; and to make the height of the baluster eight of those parts, the height of the base three, and that of the cornice, or rail, two. Or, if it should be required to make the baluster less, the height may be divided into fourteen parts, giving eight of these to the baluster, four to the base, and two to the rail: one of the parts may be called a module, and, being divided into nine minutes, serve to determine the dimensions of the particular members; as in the annexed designs.

THE

Ballusters &c.

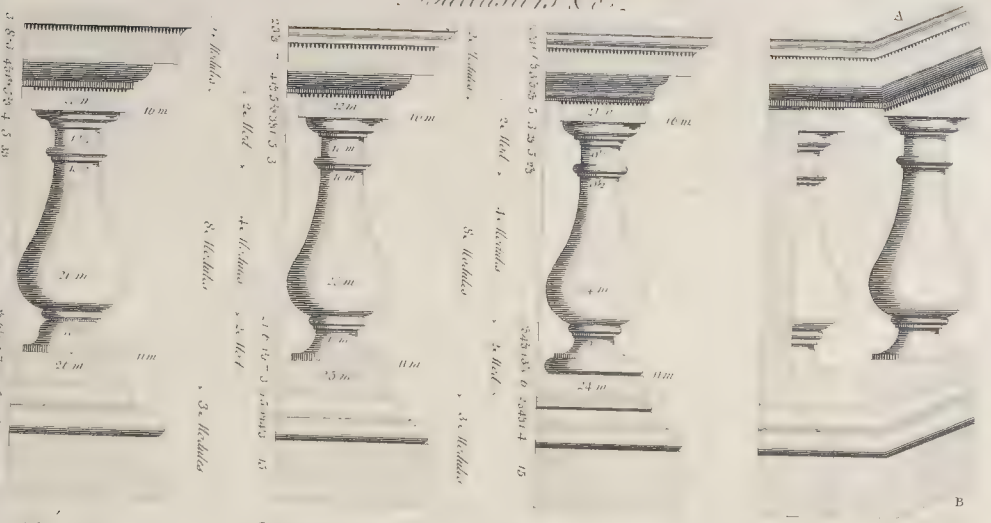
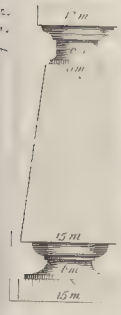


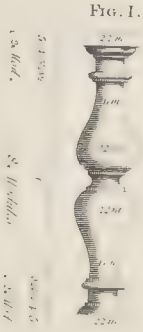
Fig. I.

Tuscan

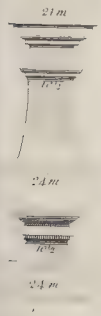


Doric or Ionic

Corinthian or Composite



Tuscan



Doric

Ionic

Corinthian

Tuscan

Tuscan

THE other baluſters exhibited in the ſame plate, are likewiſe perfect in their kinds, and collected from the works of Palladio, or other great maſters. The double-bellied ones being the lighteſt, are therefore propereſt to accompany windows, or other compoſitions of which the parts are ſmall, and the profiles delicate. The baſe and rail of theſe baluſters may be of the ſame profile, as for the ſingle-bellied ones; but they muſt not be quite ſo large. Two ninths of the baluſter will be a proper height for the rail, and three for the baſe. The proportions of the baluſters may eaſily be gathered from the deſigns, where they are marked in figures: the whole height of each being divided into ſuch a number of parts, as is moſt convenient for the determination of the inferior diviſions; one of theſe parts is the module: and is divided into nine minutes.

IN baluſtrades, the diſtance between two baluſters ſhould not exceed half the diameter of the baluſter, meaſured in its thickeſt part; nor be leſs than one third of it. The pedeſtals that ſupport the rail, ſhould be at a reaſonable diſtance from each other: for, if they be too frequent, the baluſtrade will have a heavy appearance; and if they be far aſunder, it will be weak. The moſt eligible diſtance between them is, when room is left in each interval, for eight or nine whole baluſters, beſides the two half ones engaged in the flanks of the pedeſtals. But as the diſpoſition of the pedeſtals depends on the ſituation of the piers, pilaſters, or columns in the front; it being always deemed neceſſary to place a pedeſtal directly over the middle of each of theſe; it frequently happens, that the intervals are ſufficient to contain ſixteen or eighteen baluſters. In this caſe, each range may be divided into two, or, which is better, three intervals; by placing a dye, or two dyes, in the range; each, flanked with two half baluſters. The breadth of theſe dyes may be from two thirds to three quarters of the breadth of thoſe of the principal pedeſtals. It will be beſt to continue the rail and baſe over and under them in a ſtraight line, without breaks; for frequent breaks of any kind, tending to complicate without neceſſity, are defects; and moſt ſo, when of different dimenſions; becauſe they then complicate more, and ſerve to render the confuſion greater.

THE breadth of the principal pedeſtals, when placed on columns, or pilaſters, is regulated by them; the dye never being made broader than the top of the ſhaft, nor ever much narrower: and when there are neither columns, nor pilaſters, in the compoſition, the dye ſhould never be much broader than its height, and very ſeldom narrower: on the contrary, it is often judicious to flank the principal pedeſtals on each ſide with half dyes, particularly where the ranges are long, and divided in the manner abovementioned, as well to mark, and give conſequence to theſe pedeſtals, as to ſupport the ends of the rails; and give both apparent and real ſolidity. In ſuch caſe, theſe principal pedeſtals muſt break forward more or leſs, as the nature of the deſign may require, and the baſe and rail muſt profile round them.

ON ſtairs, or other inclined planes, the ſame proportions are to be obſerved as on horizontal ones. It is indeed ſometimes cuſtomary, to make the mouldings of the baluſters follow the inclination of the plane: but this is difficult to execute, and when done, not very handſome; ſo that it will be better to keep them always horizontal, and ſhape the abacus and plinth in the form of wedges; as in figure A B, plate of baluſters: making their height, at the axis of the baluſter, the ſame

as uſual. The diſtance between two baluſters on inclined planes, muſt not be quite ſo much as when they are in a horizontal ſituation; becauſe the thickeſt parts do not then come on the ſame level. Le Clerc thinks it beſt to finiſh the inclined baluſtrades of ſtairs, or ſteps, with horizontal pedeſtals, placed on the floor, or pavement, to which they deſcend. The method of joining the horizontal mouldings of theſe to the inclined ones of the rail and baſe of the baluſtrade, is expreſſed in figure A of the annexed plate.

As the intention of baluſtrades is properly to encloſe terraſſes, and other heights to which men reſort, in order to prevent accidents; it is an impropriety, as D'Aviler obſerves, to place them on the inclined cornices of pediments; as at Sta. Suſanna, and Sta. Maria de la Vittoria, near Diocleſian's baths at Rome; or in any other places, where it is not apparently, at leaſt, practicable for men to walk.

WHEREVER baluſtrades are uſed in interior decorations, as on ſtairs, or to encloſe altars, thrones, tribunals, alcoves, buffets, or muſick galleries in publick aſſembly-rooms; or when, in gardens, they encloſe baſons of water, fountains, or any other decorations, the forms of the baluſters may be varied; and enriched with ornaments properly adapted to the place they ſerve to ſecure and adorn.

WHEN ſtatues are placed upon a baluſtrade, their height ſhould not exceed one quarter of the column and entablature, on which the baluſtrade ſtands. Their attitudes muſt be upright; or, if anything, bending a little forwards, but never inclined to either ſide. Their legs muſt be cloſe to each other; and the draperies cloſe to their bodies: for whenever they ſtand ſtradling, with bodies tortured into a variety of bends, and draperies waving in the wind, as thoſe placed on the colonades of St. Peter's, they have a moſt diſagreeable effect; eſpecially at a diſtance: from whence they appear like lumps of unformed materials, ready to drop upon the heads of paſſengers. The three figures placed on the pediment of Lord Spencer's Houſe in the Green Park, which were executed by the late ingenious Mr. Spang, are well compoſed for the purpoſe. The height of vaſes placed upon baluſtrades, ſhould not exceed two thirds of the height given to ſtatues.

SOME there are, who think ſtatues of the human figure, employed to decorate buildings, ſhould never exceed the real human ſize; alledging that they are the ſcales by which we judge of grandeur, and that therefore any increaſe of dimenſion in them, muſt naturally leſſen the grandeur of appearance, in the whole ſtructure.

FOR my own part, I cannot be of their opinion; being perſuaded, that few, if any, judge by ſuch far-fetched compariſons, and that no violent impreſſions can be made upon the mind, by combinations which are too complicated to be inſtantaneous: it is indeed true, that ſtatues of an enormous ſize, make the architecture which they accompany, appear trifling; but it is as true, that diminutive ones make it appear clumſy. Yet neither of theſe effects are owing to the forms, but entirely to the dimenſions of the objects; for it is very certain, that if inſtead of ſtatues, flower pots, bomb ſhells, flaming altars, or any other things of a diſproportionate ſize were employed, they would produce the very ſame effect, though they were ever ſo unlike either the human figure, or any other animal being whatever. It will therefore be proper on all occaſions, where ſtatues are employed in decorations of architecture,

architecture, to obſerve the proportion above eſtabliſhed, which is built upon the practice of the greateſt architects of preceding ages, whoſe aim it conſtantly was, to give to each object its due conſequence in the compoſition, without detriment to the reſt; that ſo all might equally contribute, to produce the general wiſhed for effect.

OTHERS there are, who totally reject the practice of placing ſtatues on the outſides of buildings, founding their doctrine, probably, upon a remark which I have ſomewhere met with in a French author; importing, that neither men, nor even angels, or demi-gods, could ſtand in all weathers, upon the tops of houſes and churches.

THE obſervation is wiſe, no doubt; yet, as a piece of marble or ſtone is not likely to be miſtaken for a live demi-god, and as ſtatues, when properly introduced, are by far the moſt graceful terminations of a compoſition; one of the moſt abundant ſources of varied entertainment; and amongſt the richeſt, moſt durable, and elegant ornaments of a ſtructure; it may be hoped they will ſtill continue to be tolerated.

IN interior decorations, it is ſometimes cuſtomary to employ inſtead of baluſters, certain ornaments, called Frets, or *Guillochis*. I have in the plate of baluſters, given ſome deſigns of ſuch, for the uſe of thoſe who incline to employ them, and many others may be found in le Pautres, and other ornamental publications. But it will be adviſable to uſe them ſparingly; for repreſenting leaves, ribbands, and flowers, they do not carry with them any idea of ſtrength, and appear therefore not calculated for a fence or anything to lean upon.

Of GATES, DOORS, *and* PIERS.

THERE are two kinds of entrances; doors, and gates. The former ſerve only for the paſſage of perſons on foot, but the latter are likewiſe contrived to admit horſemen and carriages. Doors are uſed as entrances to churches, and other public buildings, to common dwelling-houſes, and as communications between the different rooms of apartments. Gates ſerve as inlets to cities, fortreſſes, parks, gardens, palaces, and all places to which there is a frequent reſort of carriages. The apertures of gates being always wide, they are generally made in the form of arches, that figure being the ſtrongeſt: but doors, which are uſually of ſmaller dimenſions, are commonly of a parallelogram figure, and cloſed horizontally. The ancients indeed, ſometimes made their doors, and even their windows, narrower at the top than at the bottom: in the temple of Veſta at Tivoli, there are examples of both; and Vitruvius, in the ſixth chapter of his fourth book, lays down rules for the formation of Doric, Ionic, and Attic doors, by which the apertures of all, are made conſiderably narrower at the top, than at the bottom. This oddity has been very little practiced by the modern artiſts. Scamozzi diſapproves of it; ſo do ſeveral other writers: and it is a matter of ſurpriſe, that a perſon of ſuch refined taſte, as the Earl of Burlington, ſhould have introduced a couple of theſe ill-formed doors, in the *Cortile* of his houſe in Piccadilly.

IT muſt however be allowed that they, like ſome other uncouth things, have one valuable property; they ſhut themſelves: which in a country, where neither man nor woman takes thought, or trouble, about ſhutting doors after them, deſerves its praiſe; and was, perhaps, the original cauſe of their introduction among the ancients.

THE general proportion for the apertures, both of gates and doors, whether arched or quadrangular, is, that the height be about double their breadth, or a trifle more. Neceſſity probably, gave birth to this proportion, which habit confirmed and rendered abſolute. In the primitive huts, the entries were doubtleſs ſmall; perhaps, in imitation of thoſe to ſwallows neſts, no larger than was ſufficient for a man to creep through. For thoſe rude buildings being intended merely as retreats in the night, or in times of bad weather, it is natural to ſuppoſe they made the entrance to them as ſmall as poſſible, to exclude the air and rain. But when architecture improved, and methods were diſcovered of ſhutting the door occaſionally, they made it of ſuch a ſize as was neceſſary for giving admittance to a tall, bulky man; without ſtooping, or turning aſide: that is, they made it about three foot wide, and ſix foot high; or twice as high as broad; which proportion, being become habitual, was preferred to any other, and obſerved, even when the ſize of the entrance was conſiderably augmented, and other proportions would have been equally convenient.

WE may, I believe, look for the origin of many proportions in the ſame ſource; and of forms, in their aptitude to the purpoſes they ſerve: particularly with relation to ſuch objects as were, or are, of real uſe. And the pleaſure excited in us at their ſight, muſt, I am perſuaded, be aſcribed, rather to convenience, cuſtom, prejudice, or to the habit of connecting other ideas with theſe figures, than to any peculiar charm inherent in them, as ſome are diſpoſed to maintain.

THUS, when ſtruck with a fair female face, bright eyes, a florid complexion, good teeth, well turned limbs, a ſmooth unſpotted ſkin; it is not ſo much the form or colour, the elegant turn or ſmoothneſs of the frame, which affect us; as the inferences deduced from theſe appearances, of the general ſtate of mind; the bodily health and activity; the purity and fragrance; the ſenſibility and powers of communicating pleaſure, inherent in the beloved object: for if thoſe ſparkling eyes have borne falſe teſtimony; or thoſe limbs, which indicated agility and graceful motion, are found ſluggard, heavy, and aukward; if inſtead of purity and fragrance, their oppoſites offend the ſenſes; and inſtead of ſenſibility, dullneſs, or diſtaſte; our affection quickly abates, and the ſame object which commanded our love, ſoon excites no other emotion than that of indifference; perhaps of diſguſt; and even averſion.

AND thus with regard to ſtructures; whether conſidered in their general form, or ſeparately in their parts; whenever the maſſes and ſub-diviſions are few in number; firmly marked by quick and oppoſite tranſitions; the breadths and widths being predominant; we are impreſſed with ideas of grandeur, majeſty, manly ſtrength, and decorous gravity. And when the compoſition appears more detailed; the changes gradual and leſs contraſted; the heights predominant; we are impreſſed with

with ideas of elegance, delicacy, lightneſs and gaiety. Exceſſes in either of theſe caſes are equally dangerous, and productive of ſenſations, though oppoſite, yet equally diſguſting: a ſtep beyond the bounds of grandeur, ſinks into clumſineſs and ponderoſity; a ſtep beyond the limits of elegance, degenerates into weakneſs, triviality and affectation. Perfection conſiſts in mediums between extremes; and forcible effects are produced by verging towards them: all which, the rules of art tend to point out, and to explain.

OUR Saxon and Norman fore-fathers, ultimate corruptors of the almoſt effaced Roman architecture; ſufficiently prove, by the remains of their churches, monaſteries, and caſtles; to what extent barbariſm may carry deformity, gloom, unwieldy grandeur, and clumſy ſolidity. And their ſucceſſors of the thirteenth century, though following a manner infinitely more ſcientifick and regular; often carried elegance, lightneſs, and exceſſive decoration, far beyond their proper limits: till, in the fifteenth and ſixteenth centuries, that manner had its laſt poliſh among us; was cleared of its redundancies; improved in its forms; ſimplified and perfected in its decorations: in ſhort, made what it is, in ſome of the laſt ſtructures of that ſtile; the admiration of all enlightened obſervers.

AMONGST the reſtorers of the ancient Roman architecture, the ſtile of Palladio is correct and elegant; his general diſpoſitions are often happy; his outlines diſtinct and regular; his forms graceful: little appears that could with propriety be ſpared, nothing ſeems wanting: and all his meaſures accord ſo well, that no part attracts the attention, in prejudice to any of the reſt.

SCAMOZZI, in attempting to refine upon the ſtile of Palladio, has over-detailed, and rendered his own rather trifling; ſometimes confuſed. Vignola's manner, though bolder, and more ſtately than that of Palladio; is yet correct, and curbed within due limits; particularly in his orders: but in Michael Angelo's, we ſee licence, majeſty, grandeur, and fierce effect; extended to bounds, beyond which, it would be very dangerous to ſoar.

BUT whether there be any thing natural, poſitive, convincing and ſelf amiable, in the proportions of architecture; which, like notes and accord in muſick, ſeize upon the mind, and neceſſarily excite the ſame ſenſations in all; or whether they were firſt eſtabliſhed by conſent of the ancient artiſts, who imitated each other; and were firſt admired, becauſe accompanied with other real, convincing beauties; ſuch as richneſs of materials, brilliancy of colour, fine poliſh, or excellence of workmanſhip; and were after, only preferred through prejudice or habit; are queſtions which have much occupied the learned. Thoſe who wiſh to ſee the arguments for, and againſt, theſe reſpective notions; are referred to Perrault, Blondel, and other writers upon the ſubject. To the plurality of ſtudents in the profeſſion, it may be ſufficient to obſerve; without attempting to determine in favour of either ſide; that both agree in their concluſion: the maintainers of harmonick proportions, proving their ſyſtem, by the meaſures obſerved in the moſt eſteemed buildings of antiquity; and the ſupporters of the oppoſite doctrine allowing, that as both artiſts and criticks, form their ideas of perfection, upon theſe ſame buildings of antiquity; there cannot be a more infallible way of pleaſing, than by imitating that, which is ſo univerſally approved.

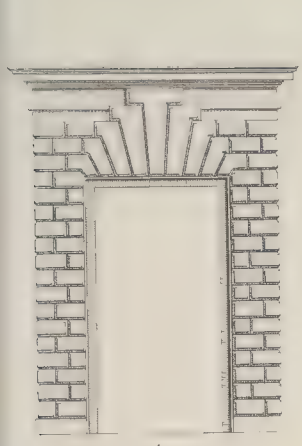
IT muſt however be obſerved, that ſounds operate very differently from viſible objects; the former of which affect all, and always in the ſame manner. The operation being merely mechanical, the ſame ſort of vibration, produces at all times the ſame effect; as equal ſtrokes upon a bell, produce the ſame ſounds. But viſible objects act differently. Their effect is not alone produced, by the image on the organ of ſight; but by a ſeries of reaſoning and aſſociation of ideas, impreſſed, and guiding the mind in its deciſion. Hence it is that the ſame object pleaſes one, and is diſliked by another; or delights to-day, is ſeen with indifference, or diſguſt, to-morrow. For if the object ſeen, had alone the power of affecting; as is the caſe with ſounds; it muſt affect all men alike, and at all times in the ſame manner, which by long and repeated experience, we know is not the caſe.

ONE certain ſource of general approbation, which admits of no diſpute, nor is ſubject to any exceptions, is, a ſtrict conformity of character, between the object and its application; between the whole, and the parts of which that whole is compoſed; the leaſt diſcord between theſe, immediately ſeizes upon the mind, and excites diſguſt, contempt, or ridicule; in proportion as the deviations appear greater or leſs; more unuſual, or more unnatural. And it is farther to be obſerved, that the ſame proportions, the ſame objects and combinations, which ſatisfy, even excite admiration in one caſe; or upon one occaſion; may excite diſlike in others, if erroneouſly applied; of which, there cannot be a ſtronger illuſtration than the human frame; male, and female; ſince almoſt every quality which conſtitutes perfection in one, becomes by being applied to the other, a ſtriking blemiſh; either of a diſguſting, or ridiculous nature.

THE uſual ornaments of gates; conſiſt of columns, pilaſters, entablatures, pediments, ruſticks of various ſorts, impoſts, archivolts, conſoles, maſks, &c. &c. and the common method of adorning doors; is, with an architrave ſurrounding the ſides and top of the aperture; on which are placed a regular frize and cornice. Sometimes too the cornice is ſupported by a couple of conſoles, placed one on each ſide of the door, and ſometimes, beſides an architrave, the aperture is adorned with columns, pilaſters, caryatides, or terms, ſupporting a regular entablature, with a pediment, or with ſome other termination either of architecture or ſculpture. In the two annexed plates are given various deſigns of gates and doors.

FIGURE 1, in the plate of doors, is a ruſtic door, compoſed by Vignola; in which the aperture occupies two thirds of the whole height, and one half of the whole breadth; the figure thereof being a double ſquare. The ruſtics may be either ſmooth or hatched, froſted or vermiculated, but their outline muſt be ſharp, and their joints muſt form a rectangle. Each joint may be in breadth, one third, or two ſevenths, of the vertical ſurface of a ruſtic. The joints of the *Claveaux* or arch-ſtones, muſt be drawn towards the ſummit of an equilateral triangle, whoſe baſe is the top of the aperture. The architrave ſurrounding the aperture, may be compoſed either of a large oge and fillet, or of a plat-band, congé and fillet: its whole breadth muſt be one tenth of the breadth of the aperture, the remaining part of each pier being left for the ruſtics. The entablature is Tuſcan: the cornice thereof is to be one fifteenth of the whole height of the door; and what remains below it, being divided into twenty-one equal parts, the two uppermoſt of them will be for the frize and

Designs for Doors.



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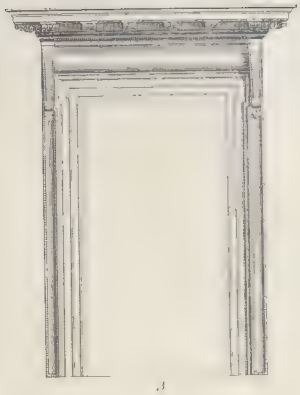

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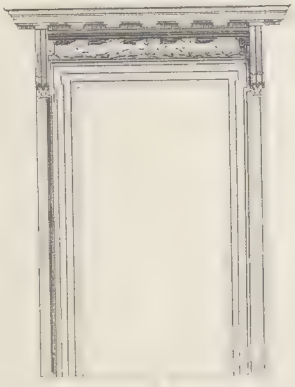

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W. Chambers delin.

and architrave, and the remaining nineteen for the ruſtics and plinth at the foot of the door. Fig. 2, is another very beautiful compoſition of the ſame great maſter, executed by him at the palace of Caprarola, in the Eccleſiaſtical State; and copied by Inigo Jones in the hoſpital at Greenwich: a circumſtance which pleads ſtrongly in its favour, though I cannot ſay but our Engliſh architect, has altered the proportions of the original, much for the worſe. The aperture is in the form of an arch, and occupies ſomewhat more than two thirds of the whole height: it is adorned with two ruſticated Doric pilaſters, and a regular entablature. The height of the pilaſters is ſixteen modules; that of the entablature four. The width of the aperture is ſeven modules; its height fourteen: and the breadth of each pier is three modules. Fig. 3, is likewiſe a deſign of Vignola's. It is of the Corinthian order, and executed in the *Cancellaria* at Rome. The height of the aperture is equal to double its width, and the whole ornament or entablature at the top, is equal to one third of the height of the aperture. The breadth of the architrave is one fifth of the width of the aperture; and the pilaſters which ſupport the conſoles, are half as broad as the architrave. The whole is well imagined, but rather heavy; and it would ſucceed better if the architrave were reduced to one ſixth of the aperture, the whole entablature being proportionably diminiſhed. The pilaſters may remain of the breadth they now are, which is not too conſiderable. Fig. 4, is a diſpoſition of Michael Angelo's. The windows of the Capitol are of this kind; and Sir Chriſtopher Wren has executed doors of this ſort, under the beautiful ſemi-circular porches in the flanks of St. Paul's Cathedral. The aperture of this deſign may be a double ſquare; the architrave one ſixth of the width of the aperture, and the whole entablature one quarter of its height. The front of the pilaſters or columns, on each ſide, muſt be on a line with the lower faſcia of the architrave; and their breadth muſt be a ſemi-diameter. Fig. 5, is imitated from a deſign of Philibert de l'Orme. It may ſerve either for a gate or outward door: by obſerving, in the former of theſe caſes, to raiſe the columns on plinths: and, in the latter, beſides plinths, to place them on ſteps, as all outſide doors ought to be; both becauſe the lower apartments ſhould never be on a level with the ground, and becauſe this elevation will ſhew the door, or indeed any other compoſition, to more advantage. The aperture may be, in height, twice its width; the piers may be a little more than half that width, and the columne muſt occupy half the breadth of the pier: their height may be eight diameters, or ſomewhat more; the architrave and cornice muſt bear the uſual proportion to the columns: the frize is omitted. The archivolt is in breadth, a ſemi-diameter of the column; and its whole curve being divided into thirteen equal parts, there will be room for ſeven *Claveaux*, and ſix intervals. The ſhafts of the column from the top of the impoſt downwards, if divided into eight equal parts, will afford room for four intervals, and four ruſtic cinctures; whereof that which levels with the impoſt may be ſquare, as in De l'Orme's deſign; the reſt of them being made either cylindrical or ſquare, at pleaſure. Fig. 6, is a door in the ſaloon of the Farneſe Palace at Rome, deſigned by Vignola. The aperture forms a double ſquare; and the entablature is equal to three elevenths of the aperture's height, the architrave being one of theſe elevenths; the whole ornament on the ſides, conſiſting of the architrave and pilaſters, is equal to two ſevenths of the width of the aperture. The cornice is Compoſite, enriched both with mutules and dentils; and the frize is in the form of a feſtoon of laurel. Fig. 7, is copied from a door at Florence, ſaid to be a deſign of Cigoli's. The height of the aperture is a trifle more than twice its width; it is arched. The impoſt is equal to half a diameter; the columns

are Ionic, ſomewhat above nine diameters high; and their ſhafts are garniſhed, each with five ruſtic cinctures. The entablature is leſs than one quarter of the column; and the length of the tablet, in which there is an inſcription, is equal to the width of the aperture.

FIG. 8, is a compoſition of Inigo Jones. The aperture may be a double ſquare; the architrave may be from one ſixth to one ſeventh of the width of the aperture, and the top of it muſt level with the upper part of the aſtragal of the columns. The columns are Corinthian, their height is ten diameters; and they muſt be placed at a ſufficient diſtance from the architrave, to leave room for the projection of their baſes. The entablature may be two ninths, or one fifth, of the column, according to the character of the building in which the door is employed: and the height of the pediment may be one quarter of its baſe or ſomewhat leſs.

FIG. 9, is a deſign of Serlio's. The aperture may be either twice as high as broad, or a trifle leſs. The diameter of the columns may be equal to one quarter of the width of the aperture, and their height may be from eight diameters, to eight and a half. The entablature muſt be ſomewhat leſs than one quarter of the height of the columns; and the height of the pediment may be one quarter of its baſe, or a trifle leſs if required.

FROM theſe deſigns and deſcriptions, the manner of compoſing doors may eaſily be collected: and every man may invent a variety of other deſigns, ſuitable to the occaſions on which they ſhall be wanted. Yet ſuch as are not endued with the talent of invention, will do well to copy theſe; which are all very excellent in their kind; and for more variety, they may recur to the deſigns of windows contained in this work, which will, moſt of them, anſwer equally well for doors.

IN the plate of gates and piers, fig. 1, is a pier, of which the diameter may be one quarter of its height, excluſive of the plinth and vaſe placed upon it; the height of both which may be equal to one diameter of the pier. The ruſtics may either be plain, chipped, froſted, or vermiculated; and the height of each courſe be one eleventh part of the height of the pier, counting to the top of the entablature; the entablature two elevenths; and the baſe of the pier one eleventh part: or if that ſhould not be thought ſufficient, one of the ruſtick courſes may be left out, and the baſe be made two elevenths inſtead of one. Fig. 2, is a gate, imitated from M. Angelo Buonaroti's deſign for Cardinal Sermonetti. The height of the aperture is ſomewhat more than twice its width; which width, occupies one third of the breadth of the whole compoſition. The order is Compoſite; and the height of the entablature is equal to one quarter of the height of the column. A break is made in it, over each column: but, unleſs the columns project conſiderably, it will be as well to carry the entablature on in a ſtraight line. The dimenſions of the particular parts may be meaſured on the deſign. Fig. 3, is a deſign of piers executed at Goodwood, in Suſſex. The diameter is one quarter of the height, excluſive of the finiſhing, which is equal to one diameter; and the height of the pier, from the top of the entablature downwards, being divided into eleven parts and a half, one of them is given to the baſe, one to each courſe of ruſtics, and one and a half to the aſtragal, frize, and cornice. On many occaſions however it may be proper to augment the height of the baſe, by omitting one of the ruſtick courſes, and making it two parts inſtead of one.

Designs for Gates &c. Plate.

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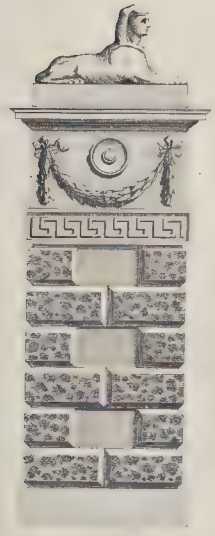

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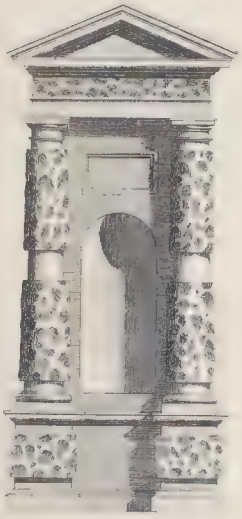

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one. Fig. 4, is a compoſition of the late Earl of Burlington's, which has been executed at his Lordſhip's Villa, near Chiſwick, and likewiſe with ſome little difference at Bedford Houſe, in Bloomſbury Square. Fig. 5, is an invention of mine, which has been ſeveral times executed; and fig. 6, is one of Inigo Jones's; which kind of pier he has executed at Aimſbury, in Wiltſhire, the ſeat of his Grace the Duke of Queenſbury.

AMONG the deſigns at the end of this work, there are various other compoſitions for gates; and any of the arches, either with, or without pedeſtals, of which I have given deſigns in treating of arcades, may likewiſe be employed as gates: obſerving however, where the piers are weak, to fortify them; and make them at leaſt equal to half the width of the aperture.

THE firſt conſideration, both in gates and doors, is the ſize of the aperture; in fixing the dimenſions of which, regard muſt be had to the bulk of the bodies that are to paſs through. For this reaſon, inſide doors, however ſmall the building may be, in which they are uſed, ſhould never be narrower than two foot nine inches; nor need they ever, in ſmall private houſes, exceed three foot ſix inches in width, which is more than ſufficient to admit the bulkieſt perſon, and enough for the paſſage of two moderate ones. Their height ſhould at the very leaſt be ſix foot nine inches, or ſeven foot; elſe a tall man with a hat, or a lady in feathers, cannot paſs without ſtooping. In palaces, or great men's houſes, to which much company reſorts, and all the doors of the ſtate apartments are frequently thrown open, they are made much larger than above mentioned; often four, five, or ſix foot wide, with folding doors, which ſhut back in the thickneſs of the party wall, and leave a free paſſage for the company from one room to another.

DOORS of entrance to private houſes, ſhould not be leſs than three foot ſix inches wide, nor more than ſix foot; but to churches, palaces, and other publick ſtructures, where there is a conſtant ingreſs and egreſs of people, and frequently great crouds, the apertures muſt be larger; and their width, cannot be leſs than ſix feet, nor ſhould it exceed ten or twelve.

THE ſmalleſt width that can be given to the aperture of a gate is nine foot; which is but juſt ſufficient for the free paſſage of coaches: but if waggons and loaded carts are likewiſe to paſs, it muſt not be narrower than ten or eleven foot. And gates of cities, or other entrances where carriages are liable to meet, ſhould not be narrower than eighteen or twenty foot. The ſame widths as are abovementioned, muſt likewiſe be given to the intervals between piers, which equally ſerve as entrances, and anſwer all the purpoſes of gates.

In ſettling the dimenſions of the apertures of doors, regard muſt be had to the architecture, with which the door is ſurrounded. If it be placed in the intercolumniation of an order, the height of the aperture ſhould never exceed three quarters of the ſpace between the pavement and the architrave of the order; otherwiſe there cannot be room for the ornaments of the door. Nor ſhould it ever be much leſs than two thirds of that ſpace; for then there will be room ſufficient, to introduce both an entablature and a pediment, without crouding: whereas if it be leſs, it will appear trifling, and the intercolumniation will not be ſufficiently

filled. The apertures of doors, placed in arches, are regulated by the impoſts; the top of the cornice being generally made to level with the top of the impoſt. And when doors are placed in the ſame line with windows, the top of the aperture ſhould level with the tops of the apertures of the windows; or if that be not practicable, without making the door much larger than is neceſſary, the aperture may be lower than thoſe of the windows, and the tops of all the cornices made on the ſame level.

WITH regard to the ſituation of the principal entrance, Palladio obſerves that it ſhould be ſo placed, as to admit of an eaſy communication with every part of the building. Scamozzi compares it to the mouth of an animal; and, as nature, ſays he, has placed the one in the middle of the face, ſo the architect ought to place the other in the middle of the front of the edifice; that being, the moſt noble ſituation; the moſt majeſtic, and convenient.

IN ſeveral of the palaces at Rome, as thoſe of the Pamfilia in the Corſo, and of the Brachiano at Santi Apoſtoli, there are two principal entrances in the ſame aſpect: but this, in general, ought to be avoided; as it leaves ſtrangers in doubt where to ſeek for the ſtate apartments, which ſhould always be contiguous to the principal entrance. In interior diſpoſitions, the doors of communication muſt be ſituated, as much as poſſible, in a line; the advantages of which are, that it contributes towards the regularity of the decoration, facilitates and ſhortens the paſſage through the apartments, and in ſummer, or on publick occaſions, when the doors are ſet open, it produces a freer circulation of air; and likewiſe gives a much more ſplendid appearance to the apartments, by expoſing to view at once, the whole ſeries of rooms; which is more particularly ſtriking, when the apartments are illuminated, as on occaſion of balls, maſquerades, routs, or other rejoicings. There ſhould, if poſſible, be a window at each end of the building, directly facing the line of the doors of communication; that ſo the view may be more extenſive, and take in at once, not only all the rooms, but likewiſe parts of the gardens, or other proſpects ſurrounding the building: and when ever this is not practicable, it will do well to place mirrours at each end of the apartment, or to counterfeit doors, and fill them with large plates of glaſs, or with faſhes and ſquares of looking glaſs, (as is the cuſtom in France;) which by reflection multiply the rooms, the doors, and other objects, making an apartment though limited, or ſmall, appear very conſiderable.

THE door of entrance from halls, veſtibules, or antichambers, either to the principal apartment, or to any even of the inferior ones, ſhould be in the middle of the room, if poſſible, and facing a window: thoſe that lead to galleries, or any other long rooms, ſhould be in the middle of one of the ends: and, in general, all entrances ſhould be ſo contrived, as to offer to view, at the firſt glance, the moſt magnificent, and extenſive proſpect of the place they open into. The doors of communication, from one room to another, of the ſame apartment, muſt be at leaſt two foot diſtant from the front walls; that the tables placed againſt the piers, between the windows, or other pieces of furniture put there, may not ſtand in the way of thoſe who paſs. In bed rooms, care muſt be taken to make no doors on the ſides of the bed; unleſs it be to communicate with a water cloſet, wardrobe, bath, or other conveniency of that kind; as well on account of the draught of air,

air, as of the noiſe communicated through them, or attending their opening and ſhutting: both which, are always troubleſome, and on ſome occaſions dangerous. Neither ought doors to be placed near chimneys, for the ſame reaſons, and as the opening them, would diſturb thoſe who ſit by the fire.

IN our northern climates, the fewer doors a room has, the more it will be comfortably habitable: for as we have much more cold than hot weather, it is very neceſſary to make the rooms as cloſe as poſſible: otherwiſe they will not be fit to live in, the greateſt part of the year. Wherefore it will be adviſeable, never to make either more windows or doors, than are abſolutely neceſſary: and the feigning doors, to correſpond with the real ones, may certainly be omitted on many, or on moſt occaſions. Here in England, the real and feigned doors of a room, with their ornaments, frequently cover ſo great a part of the walls, that there is no place left, for either pictures or furniture: and one often ſees, in houſes built forty or fifty years ago, particularly thoſe deſigned by Mr. Kent, or Lord Burlington; a hall, or a ſalon, large enough to receive a company of ſixty or a hundred perſons; furniſhed with ſix or eight chairs, and a couple of tables.

IN compoſing doors, regard muſt be had, both in their ſize and their enrichments, to the place they lead to. Thoſe that give entrance to palaces, churches, theatres, ſtate apartments, or other places of conſequence, muſt be large, and profuſely enriched; but ſuch as open to humbler habitations, may be ſmall and ſparingly decorated: unleſs, the nature of the building ſhould require otherwiſe. Where ſeveral doors are in the ſame aſpect, as on the inſide of a hall, ſalon, or gallery, they ſhould all be of the ſame ſize and figure; unleſs there be many, in which caſe the principal ones, provided they ſtand in the middle of a ſide, or in the middle of the ends of the room, may be larger; of a different form, and more abundantly adorned than the reſt. But, whenever more than two ſorts are introduced in one room, it always tends to confuſe the ſpectator.

GATES in their compoſition muſt be characteriſtick; expreſs the nature of the place they open to, and by their dimenſions, give ſome idea of its extent and importance. Gates of cities, or of fortreſſes, ſhould have an appearance of ſtrength and majeſty; their parts ſhould be large, few in number, and of a bold relief. The ſame ought likewiſe to be obſerved in the gates of parks, publick walks, or gardens; and theſe ſucceed better when compoſed of ruſtick work, and of the maſſive orders, than when they are enriched with nice ornaments, or delicate profiles. But triumphal arches, entrances to palaces, to magnificent villas, town, or country houſes; may with propriety, be compoſed of the more delicate orders; and be adorned in the higheſt degree.

THE gates of parks and gardens are commonly ſhut with iron folding grates, either plain or adorned; thoſe of palaces ſhould likewiſe be ſo, or elſe be left entirely open all day, as they are in Italy and in France: for the grandeur of the building, together with the domeſticks, horſes, and carriages, with which the courts are frequently filled, give a magnificent idea of the proprietor, and ſerve to enliven the ſcenery.

IN London, many of our Noblemen's palaces appear from the ſtreet, like priſons, or gloomy convents; nothing is ſeen but high black walls; with one, two, or three ponderous caſtle gates: in one of which there is a hole for the conveyance of thoſe who aſpire to get in, or wiſh to creep out. If a coach arrives, the whole gate is indeed opened; but this is a work of time, and hard labour: the more ſo, as the porter exerts his ſtrength to ſhut it again immediately; either in diſcharge of his duty, or for ſome other reaſons. Few inhabitants of this city ſuſpect, and certainly fewer ſtrangers ever knew; that behind an old brick wall in Piccadilly, there is, (notwithſtanding its faults,) one of the fineſt pieces of architecture in Europe: and many very conſiderable, ſome even magnificent buildings, might be mentioned; that were never ſeen by any, but the friends of the families they belong to, or by ſuch, as are curious enough to peep into every out-of-the-way place, they happened to find in their way.

THE ancients frequently covered the cloſures of their doors with plates, and baſſo relievos of bronze. There are ſome examples yet remaining of this practice, both at the Pantheon, and at St. John de Lateran; the doors of which laſt building formerly belonged to the temple of Saturn. The doors of St. Peter's of the Vatican are likewiſe covered with bronze; and at Florence, thoſe of the Baptiſtery, fronting the cathedral, adorned with a great number of figures by Lorenzo Ghiberti, are much eſteemed. Of theſe we have now in the collection of the Royal Academy, very perfect caſts. But the extraordinary expence, and great weight of ſuch doors, have occaſioned their being laid aſide; and wood alone is now uſed. The commoneſt ſort are made of deal, or wainſcot, painted in various manners; and the better kind of them are of mahogany, or of different ſorts of rare wood inlaid.

WITH regard to their conſtruction, Mr. Ware obſerves that ſtrength, beauty, and ſtraitneſs are to be conſidered; all which purpoſes are anſwered by compoſing them of ſeveral pannels. The number of theſe muſt depend on the ſize of the door; which ſhould likewiſe regulate the thickneſs both of the pannels and the framing. If the doors be adorned with ornaments of ſculpture, as is ſometimes uſual in very rich buildings; they muſt either be ſunk in or kept very flat, upon the ſurface, both for the ſake of lightneſs, and to prevent their being broken. The pannels may be either raiſed or flat, and ſurrounded with one or two little plain or enriched mouldings, contained in the thickneſs of the framing; not projecting beyond it, as is ſometimes ſeen in old buildings.

DOORS that exceed three foot and a half in breadth, are generally compoſed of two flaps; by which means each part is lighter, when open doth not project ſo far into the room, and when required, may be made to fold entirely into the thickneſs of the wall: as has been abovementioned. It is to be obſerved that all doors ſhould open inwards, otherwiſe in opening the door to give a perſon entrance, it muſt open in his face; and may chance to knock him down.

Of WINDOWS.

THE firſt conſiderations with reſpect to windows, are, their number, and their ſize; which muſt be ſuch, as neither to admit more, nor leſs light than is requiſite.

In the determination of this object, regard muſt be had to the climate, the aſpect, the extent and elevation of the place to be lit, to its deſtination, and, in a certain degree, to the thickneſs of the walls in which the windows are made; as on that circumſtance, in ſome meaſure depends, the greater or leſs quantity of light, admitted through the ſame ſpace. In hot countries, where the ſun is ſeldom clouded, and where its rays dart more intenſely upon the earth, the light is ſtronger than in thoſe which are temperate, or cold; therefore, a ſmaller quantity of it will ſuffice: and more than ſufficient ſhould not be admitted, as the conſequence is the admiſſion of heat likewiſe. The ſame is the caſe with a ſouthern aſpect, which receives more heat, and conſequently more light, than a northern, or even an eaſtern or weſtern one. A large lofty ſpace, requires a greater quantity of lighting than one circumſcribed in its dimenſions; and art demands, that the quantity introduced, ſhould be regulated ſo, as to excite gay, cheerful, ſolemn, or gloomy ſenſations in the mind of the ſpectator; according to the nature and purpoſes, for which the ſtructure is intended.

Wherever ſunſhine predominates, light muſt be admitted and diſtributed with caution; for when there is an exceſs, its conſtant attendant heat, becomes inſufferably incommodious, to the inhabitant. In Italy, and ſome other hot countries, although the windows be leſs in general than ours, their apartments cannot be made habitable, but by keeping the window ſhutters almoſt cloſed, while the ſun appears above the horizon. But in regions where gloom and clouds prevail eight months of the year, it will always be right to admit a ſufficiency of light for theſe melancholy ſeaſons; and have recourſe to blinds, or ſhutters, whenever the appearance of the ſun renders it too abundant.

Palladio, in the xxvth chapter of his firſt book obſerves, that no certain determinate rule can be eſtabliſhed concerning the height and width of the apertures of windows; but that to him it appeared proper, in conformity to the doctrine of Vitruvius, l. 4, c. vi, to divide the ſpace between the floor and ceiling, into three parts and a half, and give to the height of the window two of theſe parts, and to its width one of them, leſs one ſixth. In another part of the ſame chapter, he ſays, the windows ſhould not be wider than one quarter of the width of the room, nor narrower than one fifth; and that their height ſhould be double their width, more one ſixth; but as in every houſe, ſays he, there are large, middling, and ſmall rooms; "And it is yet neceſſary to keep all the windows on the ſame "levels of the ſame form, I prefer thoſe rooms for determining their meaſure, "of which the length is to the width, as five to three: thus, when the width of "the room is eighteen foot, and the length thirty; I divide the width into four

" parts and a half, giving one of theſe parts to the width of each window; to its " height two of them, more one ſixth; and make all the other windows on the " ſame floor, of the ſame dimenſions."

THIS laſt rule, which neither determines the number of windows, the height of the room, nor the ſide on which the light is to be admitted; is ſurely too vague, and ſubject to error: I have ſomewhere ſeen a better rule, but cannot remember where. To the beſt of my recollection, it proportions the quantity of light to be thrown in, to the number of ſquare feet contained on the plan of the room; by which method, ſuppoſing due attention given to the height and depth of the room, ſomething more certain may be attained than by that of Palladio.

IN the courſe of my own practice I have generally added the depth and the height of the rooms on the principal floor together, and taken one eighth part thereof, for the width of the window; a rule, to which there are but few objections; admitting ſomewhat more light than Palladio's, it is, I apprehend, fitter for our climate than his rule would be.

HERE in England, our apartments are ſeldom made ſo lofty as in Italy, thoſe of our ſmaller dwelling houſes often do not exceed ten foot, and are ſeldom higher than twelve or fourteen. In ſuch, the windows may be from three to four foot wide, and in the rooms on the upper floor double, or ſomewhat more than double of that in height: by which means, when the window cill is placed at a proper diſtance from the floor, for a grown perſon to lean upon, the aperture will riſe to within eighteen inches, or two foot of the ceiling, and leave ſufficient ſpace above it, for the cornice of the room, and the architrave or mouldings which ſurround the window. But in more conſiderable houſes, where the apartments are large, and run from ſixteen to twenty foot high; or ſometimes more; the windows ſhould never be narrower than four foot; they often require to be made four and a half, ſometimes even five, or five and a half foot wide, and high in proportion. Theſe dimenſions are ſufficient for dwelling houſes of any ſize in this country, when they are larger, they admit too much of the cold air in winter, and are troubleſome to manage; but churches, banquetting rooms, or other buildings of a publick nature; may have much larger windows, and proportioned to the architecture, of which ſuch ſtructures are compoſed, the parts whereof are generally large.

WITH regard to the beauty of exterior decorations, if an order comprehends two ſtories, the apertures of the windows with which it is accompanied, ſhould not much exceed three modules in width, but when it contains only one ſtory, their width may be four and a half, or even five modules. Windows contained in arches, may have from two fifths to three ſevenths of the arch in width; and their height muſt be ſuch, that the laſt horizontal moulding of their cornice may anſwer to the top of the impoſt of the arch: the whole pediment being contained in the circular part. The pediment muſt be triangular; for curves above each other, unleſs they be ſimilar and parallel, do not ſucceed.

THE proportions of the apertures of windows, depend upon their ſituation: their width in all the ſtories muſt be the ſame, but the different heights of the apartments, make it neceſſary to vary the heights of the windows likewiſe.

IN

IN the principal floor, it may be from two and one eighth of the width, to two and one third, according as the rooms have more or leſs elevation; but in the ground floor, where the apartments are uſually ſomewhat lower, the apertures of the windows ſhould ſeldom exceed a double ſquare; and when they are in a ruſtick baſement, they are frequently made much lower. The windows of the ſecond floor may be, in height, from one and a half of their width, to one and four fifths; and thoſe of atticks or mezzanines, either a perfect ſquare, or ſomewhat lower. The character of the order in which the windows are employed, and that of the profiles with which they are enriched, muſt likewiſe in ſome meaſure be conſulted, and the apertures be made more or leſs elevated, as the order of the whole decoration, or of the window itſelf, is more or leſs delicate.

THE windows of the principal floor are generally moſt enriched. The ſimpleſt method of adorning them is, with an architrave ſurrounding the aperture, covered with a frize and cornice ſuited thereto: but, when the aperture is remarkably high with reſpect to its width, it becomes neceſſary to ſpread the ornaments on the ſides thereof, by flanking the architrave with columns, pilaſters, or conſoles, in order to give the whole compoſition an agreeable proportion. The windows of the ground floor are ſometimes left entirely plain, without any ornament whatever; at other times they are ſurrounded with an architrave, or with ruſticks, or have a regular architrave, crowned with its frize and cornice. Thoſe of the ſecond floor have generally an architrave, carried entirely round the aperture; and the ſame is the method of adorning attick or mezzanin windows: but theſe two laſt have ſeldom or ever either frize or cornice; whereas the ſecond floor windows, whenever their aperture approaches a double ſquare, are often adorned with both. As at the Banqueting-Houſe, and in many other buildings of note.

THE cills of all the windows on the ſame floor, ſhould be on the ſame level; and raiſed above the floor, from two foot nine inches, to three foot, at the very moſt. When the walls are thick, they ſhould be reduced under the apertures of of the windows for the conveniency of looking out: and ſeats may be contrived to fit theſe receſſes, as is the cuſtom in many of our modern Engliſh houſes. In France, and now too often here, the windows are carried quite down to the floor; which when the building is ſurrounded with gardens, or other beautiful proſpects, renders the apartments exceedingly pleaſant in ſummer, but then they become exceedingly cold in winter. And the iron-work, which in France, and latterly very much here, is placed on the outſide; by way of fence againſt accidents: ought never to have place, where regular architecture is intended: for all the gilding and flouriſhing in the world, can never make it tolerably accordant with the reſt of the compoſition.

IN regular built houſes, the cills of the windows on the ground floor, ſhould be raiſed ſix foot above the pavement on the outſide of the building; to hinder paſſengers from looking into the apartments. But when this cannot be done, without raiſing the floor itſelf more than may be neceſſary, the lower parts of the windows may be furniſhed with blinds. The tops of the apertures of windows, ſhould never, within the apartments, be carried cloſe up to the cornice of the room: a ſufficient ſpace ought always to be left for an architrave, or at leaſt two or three

mouldings to ſurround them, without crouding upon the cornice: between which and theſe architraves the laths whereon the curtains faſten are generally placed.

THE interval between the apertures of windows depends, in a great meaſure, on their enrichments. The width of the aperture, is the ſmalleſt diſtance that can be between them; and twice that width, ſhould in dwelling houſes, be the largeſt; otherwiſe the rooms will not be ſufficiently lighted, and the building will have rather the appearance of a priſon, than of a ſtructure calculated for the conveniences, and enjoyments of life. The purpoſe for which the building is intended ſhould, as has been before obſerved, regulate the quantity of light to be introduced: and therefore in dwelling houſes, and all places where comfort and pleaſure are the main purpoſes, there cannot well be too much: but in ſacred ſtructures, which ſhould affect the mind with awe and with reverence, or in other great works, where grandeur of ſtyle is aimed at, it ſhould be cautiouſly and rather ſparingly diſtributed.

THE windows neareſt to outward angles, muſt be at leaſt the width of their aperture diſtant from the angle; and a larger ſpace will be ſtill more ſeemly, and render the building more ſolid. In all the ſtories of the ſame aſpect, the windows muſt be placed exactly one above the other; and thoſe to the left ſymmetrize, with thoſe to the right, both in ſize, ſituation, number, and figure. The reaſons for all theſe things are obvious enough, and therefore it is needleſs to mention them. The licentious practice of intermitting the architrave and frize of an order, in the intervals between the columns or pilaſters, to make room for windows and their enrichments, which are carried cloſe up to the cornice, can on no account whatever be ſuffered in regular architecture; it being in the higheſt degree abſurd to carry the windows above the ceiling; and great want of judgment in an architect, to intermix crouded together, ſuch a number of rich complicated parts, as are thoſe of the entablature of the order, and the entablatures of the windows. Beſides the whole beauty of the order, when ſo mutilated, is deſtroyed; its proportions and figure being entirely changed. An interruption of the whole entablature, to make room for a window, and converting it into an impoſt to the archivolt, as we ſee done on the flanks of the Manſion Houſe, is a licenſe equally unpardonable. Sir Chriſtopher Wren was extremely fond of theſe mutilations; and every lover of architecture, while he admires the exterior of St. Paul's, muſt owe him ſome grudge, for having ſo unmercifully mangled many parts of the inſide, of that ſplendid ſtructure.

THE common ſort of builders in this country, are extremely fond of variety in the ornaments of windows, and indeed in every other part of a building; imagining, probably, that it betrays a barrenneſs of invention, to repeat the ſame object frequently. There is a houſe near Berkley Square, with only eleven windows in the whole front, and yet they are of ſeven different ſorts. At Ironmonger's Hall in the City, the caſe is the ſame; there being ſeven or eight ſorts of windows in the ſame aſpect: and the like is to be met with in many other buildings, both in town, and in the country.

THESE inventive gentlemen would do well to give their attention to ſome profeſſors of the mechanic arts, who, though exerciſing their talents on meaner objects, are

are nevertheleſs worthy of their imitation. No taylor thinks of employing ſeven or eight kinds of buttons on the ſame coat: a cutler will not make ten different ſorts of knives for the ſame ſet; and if a cabinet maker be truſted to furniſh a room, he ſeldom introduces more than one or two ſorts of chairs. Their practice is founded on experience; the general approbation of mankind is the ſtandard they go by.

WE do not diſcover, either in the works of antiquity, or thoſe of the great modern architects, any traces of this childiſh hankering after variety. The ſame object is frequently by them, repeated a hundred times over; and this is one of the cauſes of that amazing grandeur, that noble ſimplicity, ſo much to be admired in their productions.

THIS ſameneſs muſt however have its limits: for when carried too far, the imagination of the beholder ſtagnates, for want of occupation. In the moſt admired works of architecture, we find the ſame object, generally continued throughout the ſame level: thus one order, and one ſort of windows, or niches, generally reign throughout the ſtory: but in the other ſtories, where the eye, and the imagination, neceſſarily aſſume a freſh courſe, the decoration is altered.

SCAMOZZI, and ſome other eminent architects, both in their doctrine and practice, are fond of diſtinguiſhing the middle of every compoſition, by an object different from the reſt. Thus, in a range of windows, the middle one is generally either Venetian, or in the form of an arch; though all the reſt are ſquare. How this may affect others, I do not well know: but for my own part, I do not like the practice, excepting where it may be abſolutely neceſſary. Every one from his own experience muſt, I think, have felt a ſudden uneaſineſs ariſing, on finding a ſtyle, a ditch, or other impediment of that nature, in his way; and the mind is equally diſturbed, when thus violently and unexpectedly interrupted, in contemplating the parts of a building.

SOMETIMES, however, it may be neceſſary to increaſe the ſize, and vary the figures of the windows, either in the center break, or in ſome other prominent part of a front; in order to light a ſalon, a gallery, or a hall, higher than the reſt of the rooms. But then it will always be adviſeable to repeat the ſame form if ſimple, as an arch; three, five, or more times, according to the extent of the plan, as has been done on the ſouth front of Holkham: that ſo, the mind may be in ſome degree ſatiated, before it is conducted to a new object.

VENETIAN windows, and Venetian doors too, are on ſome occaſions neceſſary; particularly, in ſmall buildings; to light a hall, a veſtibule, or ſuch other rooms, as cannot admit of two windows, and yet would not be ſufficiently lit with one. But where they can be avoided, it is beſt: for the columns which ſeparate the large interval, from thoſe on the ſides, form ſuch ſlender partitions, that, at a diſtance, they are ſcarcely perceived; and the whole looks like a large irregular breach made in the wall.

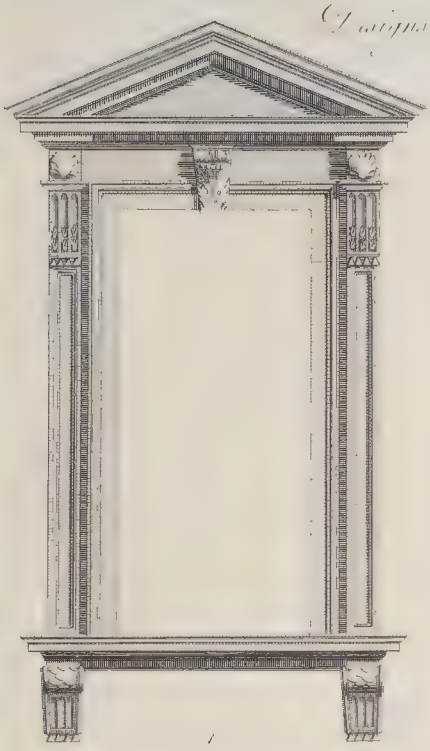
AND however adviſeable it may be to repeat the ſame form, as has above been mentioned, the repetition of theſe Venetian windows, ſhould always be avoided.

In the north front of Holkham, there are no leſs than ſeven of them, which added to the quantity of trifling breaks, and ups, and downs, in the elevation, keep the ſpectator's eye in a perpetual dance to diſcover the outlines: than which, nothing can be more unpleaſing, or deſtructive of effect. Indeed Mr. Kent, who was the deſigner of this building, though we have it publiſhed under another name; was very fond of puzzling his ſpectators: witneſs the Horſe Guards, Holkham, the Treaſury, and other of his works: which certainly would have added more to his fame, had they been leſs complicated and abundant in variety.

THE ſaſhes of windows are generally made of wainſcot, or mahogany, and ſometimes of copper, or other metals: the London artificers excel in theſe works: they make them very neatly, and though in appearance ſlight, very ſtrong. The ſquares of glaſs are proportioned to the ſize of the windows; there being commonly three in the width, and four in the height, whatever be the dimenſions of the window: each ſaſh is compoſed of two equal parts, placed one above the other, and either the lowermoſt, or both of them, being hung on pullies, and counterpoiſed with weights, are moved up or down with great eaſe: both the cords and the weights being concealed. Theſe are much neater, and much more convenient, than the French ones; which are compoſed of two vertical diviſions, turn on hinges, and are ſhut with an apparatus of ironwork always in the way, and weighing almoſt a hundred weight. The ſhutters are always within the apartments, wherever beauty is aimed at; thoſe on the outſide deſtroying the appearance of the front. They are divided into ſeveral vertical ſlips, folding behind each other, for the conveniency of ranging or boxing them when open, in the thickneſs of the wall. Each ſlip or fold is framed and compoſed of ſeveral pannels, either raiſed or flat, ſurrounded with ſmall mouldings contained in the thickneſs of the framing: which, when the profiles in the room are enriched, ſhould likewiſe be ſo; at leaſt on the fold that faces the aperture, when the ſhutters are turned back; the front of which muſt ſtand fluſh with the inner edge of the architrave ſurrounding the window, all the other folds being ranged behind it.

IN the three annexed plates of windows, I have given a great variety of deſigns. Fig. 1, in the firſt of theſe plates is imitated from the lower windows of St. Peter's, compoſed by M. Angelo Buonaroti. The aperture is ſomewhat lower than a double ſquare in height: the architrave is one ſeventh of the width of the aperture, which is likewiſe the breadth of the pilaſters: the conſoles, both at bottom and top of the window, are, in length, one third of the width of the aperture; and the whole entablature is equal to one quarter the height thereof. Fig. 2, is a compoſition of Bartolomeo Amanato, executed in the ground floor of the Mattei Palace at Rome. The whole deſign, and particularly the lower part is well compoſed: but rather approaching towards the heavy: the parts made ſomewhat leſs would ſucceed better, as would alſo a pediment inſtead of the ſloped covering at top. Fig. 3 and 4, are both of them compoſed by Bernardo Buontalenti, and executed in different places. The aperture of this ſort of window may be a double ſquare, or a trifle more; the architrave from one ſixth to one ſeventh of the width of the aperture, and the pilaſters either the ſame; or leſs by one third, one quarter, or one fifth, according as the architrave is broader or narrower, there being very few caſes, in which both together, ſhould exceed one third of the width of the aperture, at the moſt. The height of the whole entablature, ſhould not exceed one quarter of the height of the

Designs for Windows



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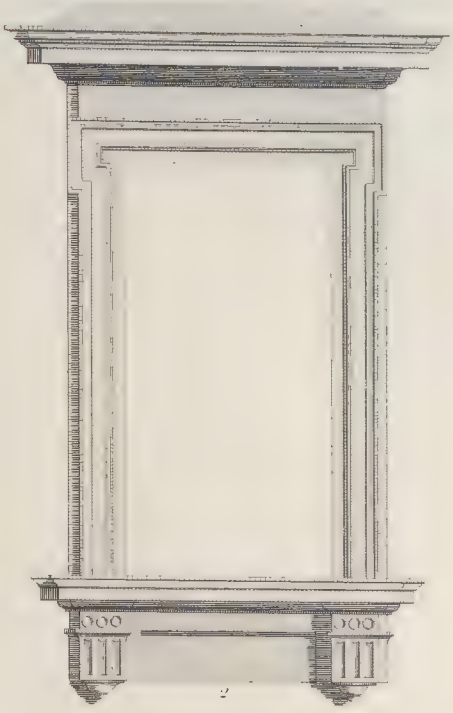

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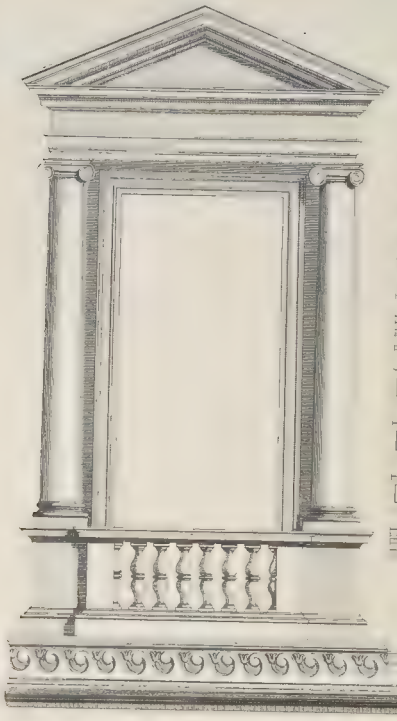

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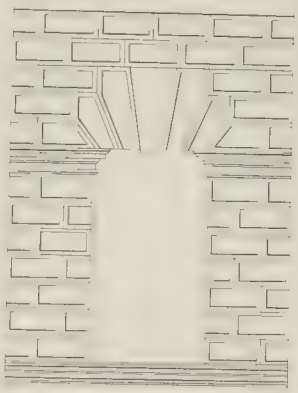

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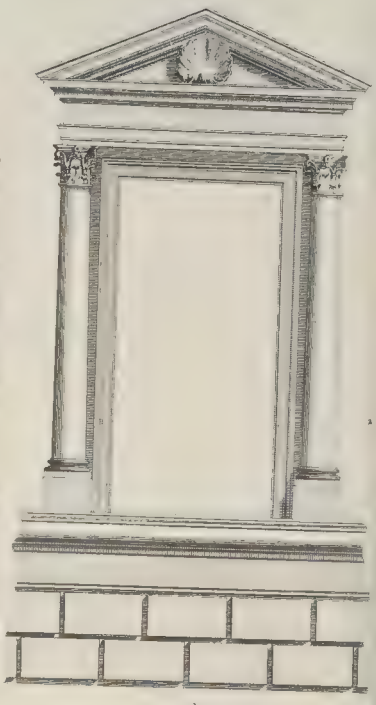

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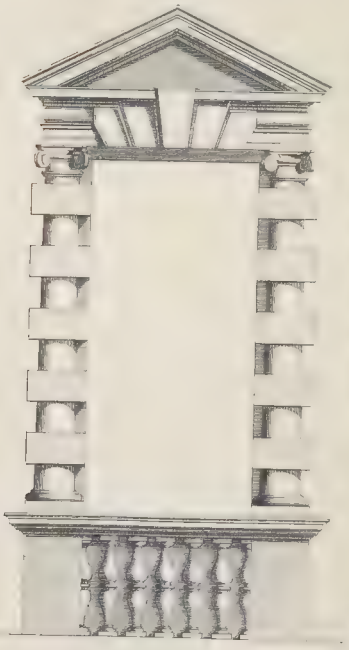

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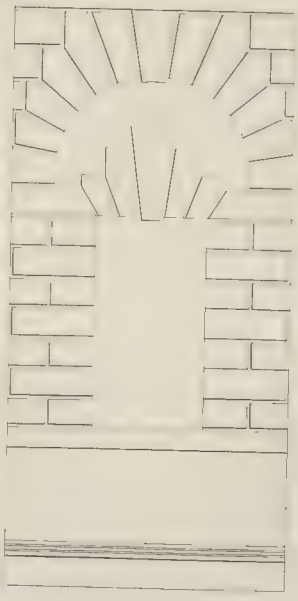

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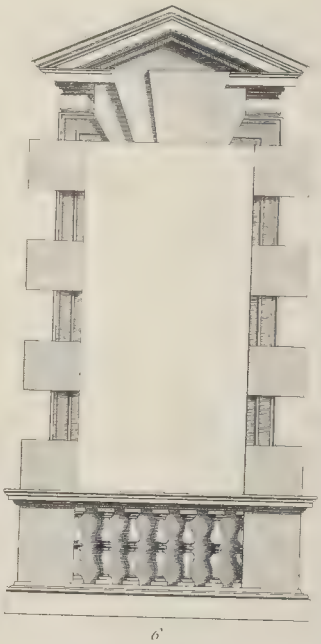

6

the aperture, nor ever be much lower: the conſoles may be equal in length to half the width of the aperture at moſt, and to one third of it at the leaſt.

IN the ſecond plate, fig. 1, is a deſign of P. Leſcot, abbot of Clagny, executed in the Old Louvre at Paris. The proportions may be the ſame, as in the two laſt mentioned ones. Fig. 2, is what we commonly call, in England, a Venetian window. It is an invention of Scamozzi's. The height of the arched aperture, is twice, and one half its width: thoſe on the ſides, are half the width of that in the middle; and their height is regulated by the height of the columns. The breadth of the archivolt, is equal to the ſuperior diameter of the columns. Fig. 3, is a deſign of Palladio's, executed by him in many of his buildings. The aperture is a double ſquare, the breadth of the architrave, is one ſixth of the width of the aperture; the frize and cornice together, are double the height of the architrave; and the breadth of the conſoles, is two thirds of the breadth of the architrave. This ſort of window ſucceeds much better without breaks in the architrave, which only ſerve to render it top heavy; and the conſoles when placed on pilaſters ſeem more ſupported, and ſerve to give a better form to the whole, than when they are only ſtuck on the wall: the breaks though frequently introduced by Inigo Jones, and other copyers or imitators of Palladio, are always unnatural; and can only be tolerated for the ſake of variety, or with a view of ſpreading a compoſition in itſelf too lean elevated. Fig. 4, is likewiſe a deſign of Palladio's, executed at the Chiericato in Vicenza. Its proportions differ very little from the former; the plat-band that ſupports the window is equal to the breadth of the architrave. Fig. 5, is a Venetian window, invented, I believe, by Mr. Campbell. Fig. 6, is a deſign of Inigo Jones's, executed at the Banqueting Houſe. I do not know exactly what proportions he has obſerved, having never had an opportunity of meaſuring the original: but the aperture may be a double ſquare, the architrave one ſixth of the aperture's width, and the whole entablature one quarter of its height; the breadth of the conſoles may be two thirds of the breadth of the architrave. Fig. 7, is a deſign of M. Angelo Buonaroti, executed at the Farneſe Palace in Rome. For the beautiful diſpoſition repreſented in fig. 8, we are indebted to the late Mr. Kent; and it is executed with ſome little difference at the Horſe Guards, in St. James's Park. Its proportions may be collected from the deſign. Fig. 9, is a deſign of Ludovico da Cigoli, and executed in the ground floor of the Ranunchini Palace at Florence. In the third plate of windows, fig. 1, is imitated from a deſign of Raphael Sanzio da Urbino, executed in the principal floor of the Pandolfini Palace at Florence. The height of the aperture, is a trifle more than twice its width; the architrave is equal to one ſeventh of the width of the aperture; the columns are Ionic, and will ſucceed beſt if entirely detached; yet that cannot well be, excepting on a ground floor: their height is nine diameters, their diſtance from the architrave of the window is a quarter of a diameter, which is likewiſe the diſtance of the entablature from the top of the ſame architrave. The height of the whole entablature, is equal to two ninths of the column; and the height of the pediment is one quarter of its baſe, or a trifle leſs: the pedeſtals and baluſtrades are in height, one quarter of the column and entablature taken together. Fig. 2, is an invention of Andrea Palladio's, executed with ſome little difference in the Porto Barbarino Palace at Vicenza. Inigo Jones has very judiciouſly introduced the ſame deſign in the flanks of Greenwich Hoſpital, and managed all the parts of it more gracefully than in the original. Fig. 3, is imitated from the windows in the principal floor of the Bracciano Palace at Rome, deſigned

by Bernini. Fig. 4, is an invention of Palladio's, and the deſign here given is very accurately meaſured and copied from the Thieni Palace at Vicenza; in the principal floor of which it is executed. The height of the aperture is two and one tenth of its width, the columns are Ionic, one quarter engaged in the wall, and nine diameters high: the bottoms of the capitals are on a line with the top of the aperture, they have angular volutes, with an aſtragal and fillet below the volute; the baſes are Tuſcan: there are five ruſtick dyes on the ſhaft of each column, which are all of an equal breadth; the inner ſides of them are on a line with the ſides of the aperture; and their projection is equal to that of the plinth of the baſe, which is one fifth of a diameter of the column. The key-ſtones are diſtributed in the manner repreſented in the deſign; they incline forwards towards the top, their ſurface is rough, and hatched irregularly with long chops, as are likewiſe the dyes on the columns, their angles alone being left ſmooth and with a ſharp outline; which roughneſs, makes an agreeable oppoſition to the ſmooth finiſhing of the other parts. The entablature is Ionic, the architrave compoſed of two faſcias only; the frize is ſwelled, and the dentil-band is placed immediately on the frize, without any moulding to ſupport it; a ſingularity which Palladio has repeated in others of his deſigns, though it has but an indifferent effect. The pedeſtals and baluſtrade, are a trifle higher than one third of the columns; the dyes and baluſters, are placed immediately on the plat-band that finiſhes the baſement: which is not ſo well, as if there had been a baſe: but has been done, in order to diminiſh the projection. This beautiful window, differs conſiderably from the deſign given of it in Palladio's book, and is undoubtedly ſuperior to it. Fig. 5, is likewiſe a deſign of Palladio's, copied from the Porti Palace at Vicenza; and fig. 6, is, I believe, an original invention of Inigo Jones's, which has been executed in many buildings in England.

I HAVE given in all, nineteen deſigns for windows, and for greater variety, the figures 3, 4, 6, 7, 8, 9, in the plate of doors may be employed; they being equally proper either for windows or doors.

Of NICHES *and* STATUES.

ARCHITECTURE, as Daviler obſerves, is indebted to ſculpture for a great part of its magnificence; and, as the human body is juſtly eſteemed the moſt perfect original, it has been cuſtomary, in all times, to enrich different parts of buildings with repreſentations thereof. Thus the ancients adorned their temples, baſilicas, baths, theatres, and other publick ſtructures, with ſtatues of their deities, philoſophers, heroes, orators, and legiſlators; and the moderns ſtill preſerve the ſame cuſtom; placing in their churches, palaces, houſes, ſquares, gardens, and publick walks, the buſts and ſtatues of illuſtrious perſonages, or basreliefs, and groupes, compoſed of various figures, repreſenting memorable occurrences, collected from the hiſtories, fables, or traditions of particular times.

SOMETIMES theſe ſtatues or groupes, are detached; raiſed on pedeſtals, and placed contiguous to the walls of buildings; by the ſide of flights of ſteps or ſtairs; at

Designs for Windows.

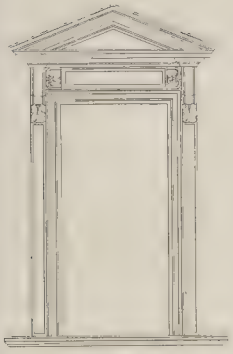

Fig. 1

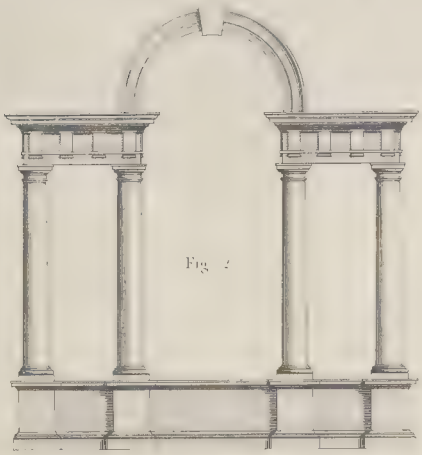

Fig. 2

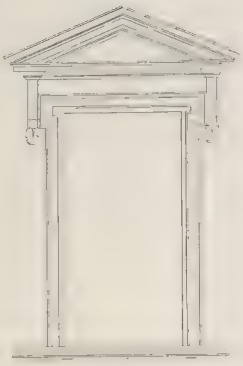

Fig. 3

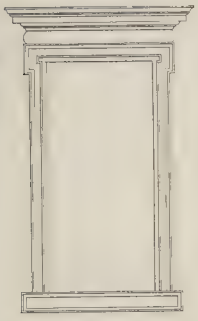

Fig. 4

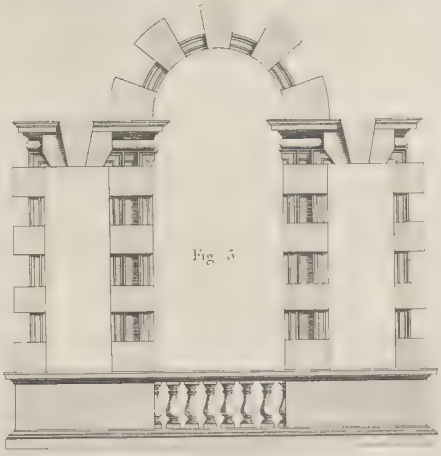

Fig. 5

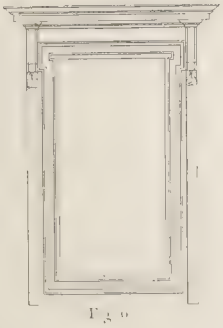

Fig. 6

Fig. 7

Fig. 8

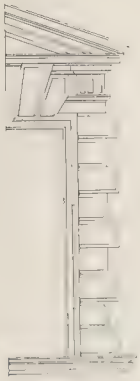

Fig. 9

THE ſize of the ſtatue depends upon the dimenſions of the nich: it ſhould neither be ſo large as to ſeem rammed into it, as at Santa Maria Majore in Rome; nor ſo ſmall as to ſeem loſt in it, as in the Pantheon; where the ſtatues do not occupy above three quarters of theh eight of the nich, and only one half of its width. Palladio in arched niches, makes the chin of his ſtatues on a level with the top of the impoſt: ſo that the whole head is in the coved part. In the nave of St. Peter's at Rome, the ſame proportion has been obſerved; and it has a very good effect. The diſtance between the outline of the ſtatue, and the ſides of the nich, ſhould never be leſs than one third of a head, nor more than one half; whether the nich be ſquare or arched: and when it is ſquare, the diſtance from the top of the head to the ſoffit of the nich, ſhould not exceed the diſtance left on the ſides. The ſtatues are generally raiſed on a plinth; the height of which, may be from one third to one half of a head: and ſometimes, where the niches are very large in proportion to the architecture they accompany; as is the caſe when an order comprehends but one ſtory; the ſtatues may be raiſed on ſmall pedeſtals; by which means they may be made lower than uſual, and yet fill the nich ſufficiently; it being to be feared leſt ſtatues of a proper ſize to fill ſuch large niches, ſhould make the columns and entablatures appear trifling. The ſame expedient muſt alſo be made uſe of, whenever the ſtatues in the niches, according to their common proportion, come conſiderably larger than thoſe placed at the top of the building: A trifling diſparity, will not be eaſily perceived, on account of the diſtance between their reſpective ſituations; but if it be great, it muſt have a very bad effect: and therefore this muſt be well attended to, and remedied: either by the abovementioned method, or by entirely omitting ſtatues at the top of the building; leaving the baluſtrade either free, or placing thereon vaſes, trophies, and other ſimilar ornaments.

SOME writers there are, who give to theſe ornaments the preference at all times; alledging that it is abſurd to ſuppoſe horſes and men conſtantly ſtanding on the roofs, or ſtuck up in the niches of a ſecond or third ſtory, in ſituations ſhocking and frightful to the imagination. De Cordemoy adviſes by all means, to avoid placing ſtatues too far from the ground; and Le Clerc is for having nothing but tutelar angels on the tops of houſes.

TO me, there appears ſomething ridiculous in this affectation of propriety; and, I believe, it may in general be eſtabliſhed; that, whenever the image is ſo different from the original it repreſents, as not to leave the leaſt probability of its being ever miſtaken for the real object; this ſtrict adherence to propriety, is very ſuperfluous.

THE character of the ſtatue ſhould always correſpond with the character of the architecture with which it is ſurrounded. Thus, if the order be Doric; Hercules, Jupiter, Pluto, Neptune, Mars, Eſculapius, or any male figures, repreſenting beings of a robuſt and grave nature, may be introduced: if Ionic; then Apollo, Bacchus, Ceres, Minerva, Mercury: and if Corinthian; Venus and the Graces, Flora, or others of a delicate kind and ſlender make, may properly have place.

NICHES being deſigned as repoſitories for ſtatues, groups, vaſes, or other works of ſculpture, muſt be contrived to ſet off the things they are to contain, to the

Designs for Chimney Pieces.

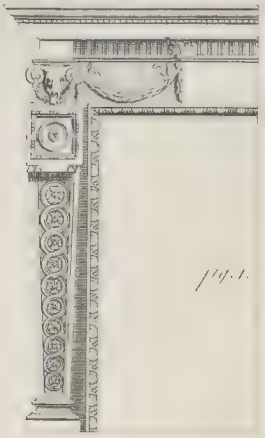

fig. 1.

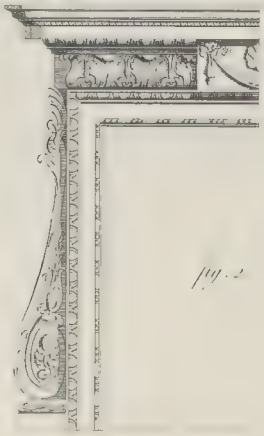

fig. 2

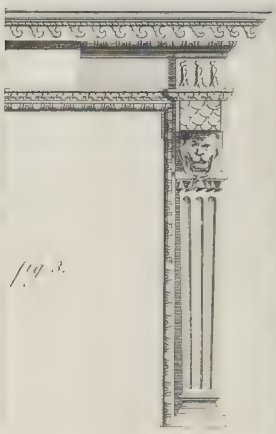

fig. 3.

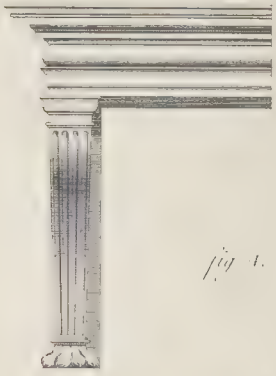

fig. 4.

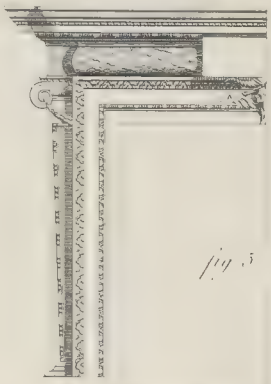

fig. 5

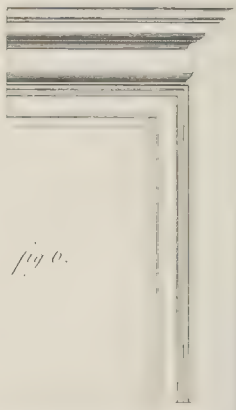

fig 6.

fig. 7.

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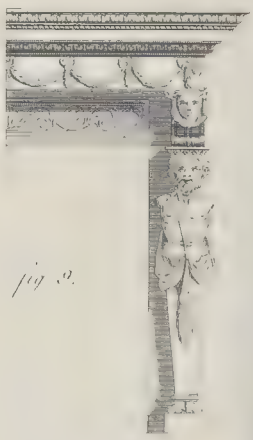


fig. 9.

the beſt advantage; and therefore, no ornaments ſhould ever be introduced within them, as is ſometimes injudiciouſly practiſed: the cove of the nich being either filled with a large ſcallop ſhell; or the whole inſide, with various kinds of projecting ruſticks; with moulded compartments either raiſed or ſunken; or compoſed of different coloured marbles: for all theſe ſerve to confuſe the outline of the ſtatue or group. It is even wrong to continue an impoſt within the nich; for even that, is of conſiderable diſadvantage to the figures; which never appear ſo perfect, as when backed and detached on a plain ſmooth ſurface. An exceſs of ornaments round the nich ſhould likewiſe be avoided; and particularly maſks, buſts, boys, or any repreſentations of the human figure; all which ſerve to divide the attention, and to divert it from the principal object.

THE depth of the nich ſhould always be ſufficient to contain the whole ſtatue, or whatever elſe it is to contain; it being very diſagreeable to ſee ſtatues, or any other weighty objects, with falſe bearings; and ſupported on conſoles or other projections, as is ſometimes done: and in the caſe of niches, the ſide views become exceedingly uncouth; for in theſe, a leg, an arm, a head, in ſhort, thoſe parts alone which project beyond the nich, appear, and look like ſo many fragments, ſtuck irregularly in the wall.

Of CHIMNEY PIECES.

AS the Egyptians, the Greeks, and the Romans, to whom architecture is ſo much indebted in other reſpects, lived in warm climates; where fires in the apartments were ſeldom or never neceſſary; they have thrown but few lights on this branch of architecture. Amongſt the antiquities of Italy, I do not recollect any remains of chimney pieces. Palladio indeed mentions two; the one at Baia, and the other near Civita Vechia; which ſtood in the middle of the rooms, and conſiſted of columns ſupporting architraves, whereon were placed the pyramids or funnels, through which the ſmoak was conveyed: much after the manner of the fire place in the Rotunda of Ranelagh Gardens. Scamozzi takes notice of three ſorts of chimney pieces, uſed in Italy in his time. One of theſe he calls the Roman, the aperture of which is ſurrounded only with a clumſy architrave; another he calls the Venetian, which is likewiſe adorned with an architrave, upon which are placed a frize and cornice, and on the ſides thereof are pilaſters with conſoles. The third ſort he calls a *Padiglione*.

THIS laſt he particularly recommends, where the walls are thin; it being not hollowed into the wall, as both the other ſorts are; but compoſed of a projecting entablature, ſupported by conſoles, terms, or caryatides, on which the pyramid is placed. This ſort of chimney piece is ſtill very common in Italy, the Dutch are very fond of it, and we find it in many of our old Engliſh country houſes. The figures 4 and 9 in the annexed plate, are the lower parts of two of them, deſigned by Palladio, and executed, the one in the Caſa Treviſan, in the iſland of Murano; and the other in the Valmarani Palace at Vicenza.

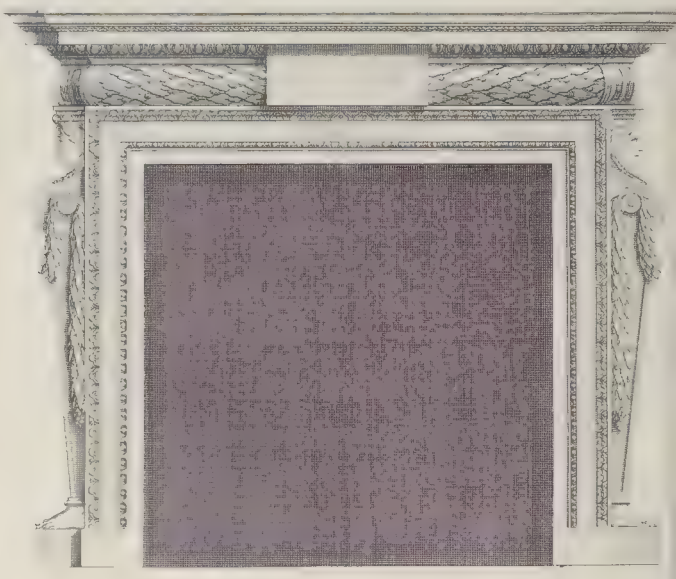
NEITHER the Italians nor the French, nor indeed any of the continental nations, have ever excelled in compoſitions of chimney pieces: I believe we may juſtly conſider Inigo Jones as the firſt who arrived at any great degree of perfection, in this material branch of the art. Others of our Engliſh architects, have ſince his time, wrought upon his ideas; or furniſhed good inventions of their own: and England, being at preſent poſſeſſed of many ingenious and very able ſculptors, of whom, one chief employment is to execute magnificent chimney pieces, now happily much in vogue; it may be ſaid, that in this particular we ſurpaſs all other nations; not only in point of expence, but likewiſe in taſte of deſign, and excellence of workmanſhip. Scamozzi mentions a chimney piece, in one of the public buildings at Venice, executed from his deſign; as a moſt uncommon piece of magnificence: having coſt upwards of a thouſand crowns. In this country, a much larger expence is very frequent; and many private gentlemens houſes, in moſt parts of England; are furniſhed with ſeveral chimney pieces, at leaſt as valuable.

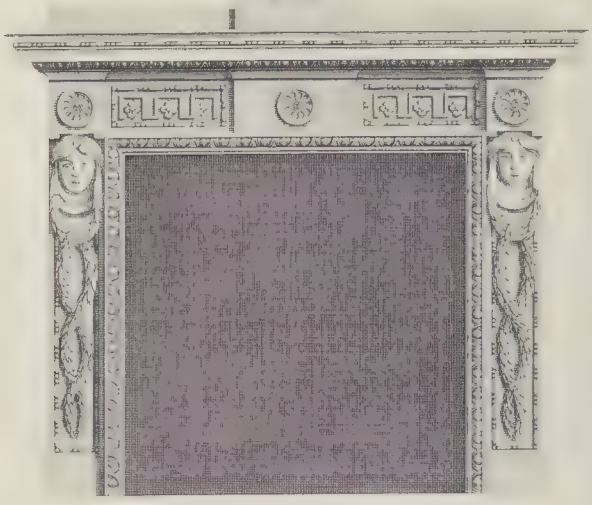
THE ſize of the chimney muſt depend upon the dimenſions of the room wherein it is placed. In the ſmalleſt apartments the width of the aperture is never made leſs than from three foot, to three foot ſix inches: in rooms from twenty to twenty-four foot ſquare, or of equal ſuperficial dimenſions, it may be four foot wide; in thoſe of twenty-five to thirty, from four to four and a half; and in ſuch as exceed theſe dimenſions, the aperture may be extended to five, or five foot ſix inches: but ſhould the room be extremely large, (as is frequently the caſe of halls, galleries, and ſalons,) and one chimney of theſe laſt dimenſions, neither afford ſufficient heat to warm the room, nor ſufficient ſpace round it for the company; it will be much more convenient, and far handſomer; to have two chimney pieces of a moderate ſize, than a ſingle one exceedingly large; all the parts of which, would appear clumſy and diſproportioned to the other decorations of the room.

THE chimney ſhould always be ſituated ſo, as to be immediately ſeen by thoſe who enter; that they may not have the perſons already in the room, who are generally ſeated about the fire, to ſearch for. The middle of the ſide partition wall, is the propereſt place in halls, ſalons, and other rooms of paſſage; to which the principal entrances are, commonly, in the middle of the front, or of the back wall: but in drawing rooms, dreſſing rooms, and the like, the middle of the back wall is the beſt ſituation; the chimney being then fartheſt removed from the doors of communication. The caſe is the ſame with reſpect to galleries and libraries, whoſe doors of entrance are generally either at one, or at both ends. In bed chambers the chimney is always placed in the middle of one of the ſide partition walls; and in cloſets, or other very ſmall places, it is, to ſave room, ſometimes placed in one corner.

WHENEVER two chimnies are introduced in the ſame room, they muſt be regularly placed, either directly facing each other, if in different walls; or at equal diſtances from the center of the wall, in which they both are placed. The Italians frequently put their chimnies in the front walls, between the windows; for the benefit of looking out while ſitting by the fire: but this muſt be avoided; for by ſo doing that ſide of the room becomes crouded with ornaments, and the other ſides are left too bare; the front walls are much weakened by the funnels; and the chimney

Chimney Pieces in the Lord Viscount Charlemont's Casine at Marino





chimney ſhafts at the top of the building, which muſt neceſſarily be carried higher than the ridges of the roofs, have from their great length, a very diſagreeable effect: and are very liable to be blown down.

In large buildings, where the walls are of a conſiderable thickneſs, the funnels are carried up in the thickneſs of the wall; but in ſmall ones, this cannot be done: the flues and chimney pieces, muſt neceſſarily advance forward into the rooms; which, when the break is conſiderable, has a very bad effect: and therefore, where room can be ſpared, it will always be beſt, either in ſhow or ſtate apartments; to make niches or arched receſſes on each ſide: and in lodging rooms; preſſes or cloſets, either covered with the paper, or finiſhed in any manner ſuited to the reſt of the room. By theſe means, the cornice, or entablature of the room, may be carried round without breaks; the cieling be perfectly regular; and the chimney piece have no more apparent projection, than may be neceſſary, to give to its ornaments their proper relief.

The proportion of the apertures of chimney pieces, of a moderate ſize, is generally near a ſquare: in ſmall ones a trifle higher, and in large ones ſomewhat lower. Their ornaments conſiſt of architraves, frizes, cornices, columns, pilaſters, terms, caryatides, conſoles, and all kinds of ornaments of ſculpture, repreſenting animal or vegetable productions of nature; likewiſe vaſes, pateras, trophies of various kinds, and inſtruments or ſymbols of religion, arts, arms, letters and commerce. In deſigning them, regard muſt be had to the nature of the place where they are to be employed. Such as are intended for halls, guard rooms, ſalons, galleries, and other conſiderable places; muſt be compoſed of large parts, few in number, of diſtinct and ſimple forms, and having a bold relief: but chimney pieces for drawing rooms, dreſſing rooms, bed chambers, and ſuch like; may be of a more delicate and complicated compoſition. The workmanſhip of all chimney pieces muſt be perfectly well finiſhed, like all other objects liable to a cloſe inſpection: and the ornaments, figures, and profiles; both in form, proportions, and quantity, muſt be ſuited to the other parts of the room; and be alluſive to the uſes for which it is intended. All nudities, and indecent repreſentations muſt be avoided both in chimney pieces and in every other ornament of apartments, to which children, ladies, and other modeſt grave perſons, have conſtant recourſe: together with all repreſentations capable of exciting horror, grief, diſguſt, or any gloomy unpleaſing ſenſations.

Chimney pieces, are either made of ſtone, of marble, or of a mixture of theſe; with wood, ſcagliola, or-moulu, or ſome other unfragile ſubſtances. Thoſe of marble are moſt coſtly, but they are alſo moſt elegant; and the only ones, uſed in high finiſhed apartments: where they are ſeen either of white, or variegated marbles, ſometimes inlaid and decorated, with the materials juſt mentioned. All their ornaments, figures, or profiles, are to be made of the pure white ſort, but their frizes, tablets, pannels, ſhafts of columns, and other plain parts, may be of party-coloured marbles, ſuch as the yellow of Sienna, the Brocatello of Spain, the Diaſpers of Sicily, and many other modern as well as antique marbles, frequently to be had in England. Feſtoons of flowers, trophies and foliages, frets and other ſuch decorations, cut in white ſtatuary marble and fixed on grounds of theſe, have a very

good effect. But there ſhould never be above two, or at the utmoſt three different ſorts of colours in the ſame chimney piece; all brilliant, and harmonizing with each other.

IN the two annexed plates are eleven different deſigns for chimney pieces; ſome of them compoſed by Palladio and Inigo Jones, the reſt by me. Their proportions may be gathered from the deſigns, which are executed with tolerable accuracy. Some other chimney pieces will be found among the deſigns at the end of the book.

THE ſhafts of the chimney funnels ſhould be regularly diſpoſed on the roofs of buildings, and all of them be made of the ſame height, breadth, and figure. They are handſomeſt when made of ſtone, of a cubical figure, and finiſhed with a light cornice, compoſed of few mouldings. Scamozzi recommends obeliſks and vaſes; Serlio has given ſeveral deſigns for decorating the tops of funnels, which reſemble towers; and Sir John Vanbrugh frequently converted his into caſtles: as may be ſeen at Blenheim, Caſtle Howard, and others of his numerous ſtately works.

NEITHER the Italians above cited, nor the Engliſhman, have been very ſucceſsful in their deſigns; but upon the ſame ideas, good ones might be compoſed; and made to terminate a ſtructure with grace and propriety.

Of PROFILES *for* DOORS, WINDOWS, NICHES, CHIMNEY PIECES, &c.

WHEN any of the abovementioned objects are very large, the profiles of the orders are employed in their decoration: but when ſmall, as is more frequently the caſe; other profiles, of a leſs complicated figure are uſed. Palladio has in his firſt book, given deſigns of ſeveral; three of which are exhibited in the annexed plate. Fig. 1, is the richeſt of the three, and very proper for windows, or doors, of the Corinthian order. The account given by that author of its proportions being very tedious and ſomewhat confuſed, is here omitted. But all the operations for proportioning the different members by equal parts, are expreſſed on the deſign.

FIG. 2, may be employed in an Ionic, or rich Doric order. Its architrave is to be divided into four parts; the frize to be made equal to three, the cornice to five of theſe parts. For the ſubdiviſions ſee the plate, or conſult Palladio's book: his whole text upon ſo ſlight a ſubject, being too long to be inſerted here.

FIG. 3, is proper in a Doric order. Its diviſions are leſs complicated than the former two, and may eaſily be collected from the deſign.

IN the beginning of this work, I have pointed out the trouble and tedioufneſs of determining proportions by equal parts; thoſe who peruſe the three paragraphs in

Profiles for Windows, Doors, Niches, or Chimney Pieces.

Fig. 1.

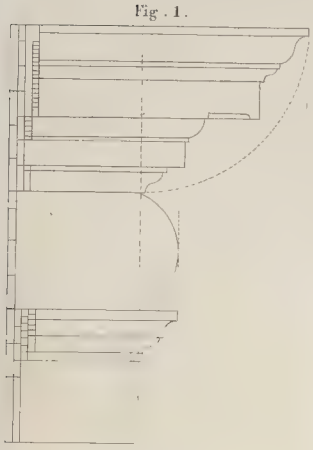


Fig. 2.

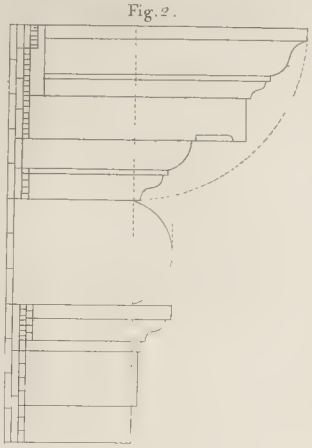


Fig. 3

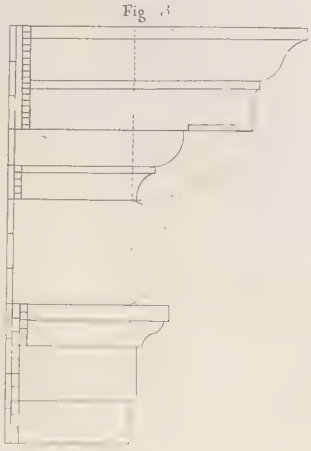


Fig. 4

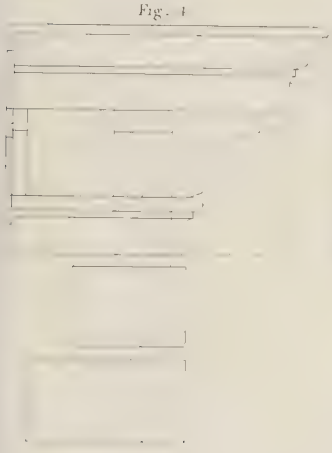
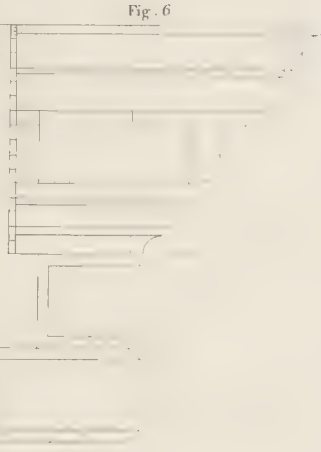


Fig. 5

Fig. 6



Block Entablatures & Rustic Quoins.

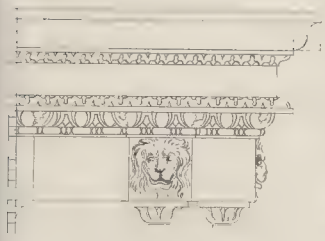


Fig. 7.

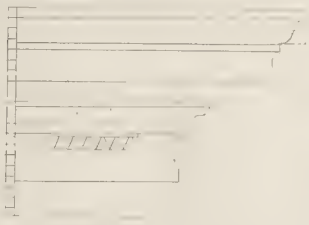


Fig. 8

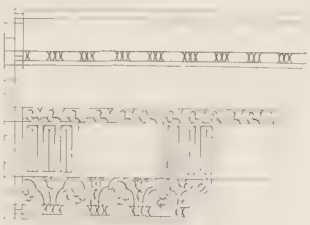


Fig. 9

Block Cornice. Architrave Cornice. Block Cornice.

in Palladio's work, employed in proportioning the three cornices juſt mentioned, will, I think, have few doubts remaining upon that ſubject. And for my own part, though I ſee no objection to Palladio's great proportions, which are proper, in moſt caſes, where ſwelled frizes are uſed; and the architrave of the door, or window, is not leſs, nor much exceeds, one ſixth of the width of the aperture; yet, for the parts, I venture to prefer employing the entablatures of the different orders of architecture, proportioned as they are; with the rejection of ſuch mouldings or members as ſeem ſuperfluous, and which, if introduced, would render the object confuſed; and from the ſmallneſs of its dimenſion, too diminutive to ſtand a compariſon with other parts of the compoſition.

THUS, for inſtance, if the order in which the door, window, or nich is placed, be Compoſite or Corinthian; the Compoſite, or Corinthian entablature may be uſed for their dreſſings, with the omiſſion of either dentils or modillions. The Compoſite architrave may be uſed as it is, but the Corinthian ſhould be diveſted of the lower faſcia, with the little aſtragal by which it is ſeparated from the faſcia directly above it.

IN the Ionic order, the Ionic entablature may on ſome occaſions be uſed as it is, to dreſs the doors and windows; provided the dentils be not cut: but in moſt caſes, it will be propereſt to leave out the dentil band, with the aſtragal above it; and ſtrengthen the fillet; which then, will make the ſeparation between the ovolo and the bottom moulding.

THE profiles of doors, of windows, of niches, and in ſhort; the profiles of all ſubſervient parts; muſt not only be leſs in the whole, but likewiſe in each particular member, than thoſe of the orders employed in the ſame compoſition: or than the cornice or entablature, which ſerves as a finiſhing to the whole deſign: it being among the groſſeſt of errors, to make any ornaments belonging to the parts, more predominant than thoſe which are particularly appropriated, to the embelliſhment of the whole maſs, as Pietro da Cortona has done at St. Carlo in the Corſo at Rome, where the profiles of the great door, on the inſide of the church, are conſiderably larger than thoſe of the order in which that door is contained.

THE uſual proportion given to architraves of outſide windows, niches, or doors, is from one ſeventh to one fifth of the width of the aperture. Where the architrave is ſupported on each ſide by pilaſters, as is frequently the caſe; or where ruſticks are applied, it may be a ſeventh, and ſhould never exceed a ſixth of the width of the aperture; but whenever it is unaccompanied, it ought never to be leſs than one ſixth, nor ſhould it ever exceed one fifth thereof. If the frizes be ſwelled, their dimenſions, as well as thoſe of the cornices, may be determined as Palladio directs; by dividing the breadth of the architrave into four parts, and giving three of theſe parts to the height of the frize, and five of them to that of the cornice: but if the frize be flat and upright, its height muſt be equal to the breadth of the architrave.

THE pilaſters which accompany the architrave, may be from one half to two thirds of its breadth. They commonly ſupport conſoles of various forms, equally broad with themſelves, and in length, generally from one half, to two thirds of the

width of the aperture. Theſe ſupport the corona of the cornice above, and reſt below on maſks, ſhells, leaves, bells, or drops.

IN interior decorations, where the eye is nearer the objects than in exterior; every thing ſhould be more delicate, and calculated for cloſer inſpection; the door architraves there ſhould never exceed a ſixth of the aperture; and the frize and cornice may be proportioned to them, as is before directed.

IT is not uſual to employ either frize or cornice over inſide windows, as they would ſtand in the way of the curtains; and though the windows are in general made wider than the doors, their architraves are never made larger; on the contrary, they are often, for the advantage of having more room in the piers for large glaſſes, reduced to three or four mouldings, ſurrounding the aperture, and forming boxes for the ſhutters to fold into.

WITH reſpect to chimney pieces, they are of ſuch various compoſitions; and ſo great a latitude is allowed the compoſer; that little can be determined concerning them. In general, their architraves ſhould not be leſs than one ſixth, nor exceed one fifth of the aperture's width; their frizes may be from two thirds to three fourths of the architrave, and their cornices ſhould ſeldom or never be higher than the frize, but on moſt occaſions ſomewhat lower; ſince when they are large, and project much, they become inconvenient, and dangerous to the heads of the company.

Of BLOCK CORNICES *and* EXTRANEOUS ENTABLATURES.

BLOCK CORNICES and entablatures, are frequently uſed to finiſh plain buildings, where none of the regular orders have been employed. Of this kind there is a very beautiful one compoſed by Vignola, much uſed in Italy, and employed by Sir Chriſtopher Wren to finiſh the ſecond order of St. Paul's. I have given a deſign of it in the ſecond plate of the Compoſite order, with the meaſures of all its parts, determined according to Vignola's method, by a module divided into eighteen minutes. When this entablature is uſed to finiſh a plain building, the whole height is found by dividing the height of the whole front into eleven parts; one of which muſt be given to the entablature, and the remaining ten to the reſt of the front. And when it is employed to finiſh an order; which however, may as well be let alone; it muſt be ſomewhat leſs in proportion to the columns, than a regular entablature would be: becauſe its parts are larger. The angles of the building, where this entablature is uſed, may be adorned with quoins; the ſhort ones about a module long, and the long ones a module and a half; the height of each being to be, about three quarters of a module, including the joint.

AMONG the profiles for windows, &c. there are three other block entablatures, of a ſimpler make; the ſecond of which, Palladio has executed in a couple of houſes: the one at Vivaro, and the other at Monteccio, villages of the Vicentine. The other

two

two are not very different from that: the meaſures of all of them, are taken from Mr. Gibbs's rules; and may eaſily be collected from the deſigns. Theſe entablatures need not exceed one thirteenth of the whole height of the front, nor ſhould they ever be much leſs than one fifteenth. Fig. 7 and 9, in the ſame plate, are two block cornices; the former of which is executed in a palace at Milan, and the other by Raphael, at a houſe in the Lungara at Rome: the height of theſe, need never exceed one ſixteenth part of the whole front, nor ſhould it be leſs than one eighteenth. Fig. 8, is an architrave cornice, which M. Angelo, Baldaſſar Peruzzi, and Palladio, have employed in ſome of their compoſitions. This kind of profile is a proper finiſhing for columns ſupporting the archivolts of arches, as it approaches nearer the proportion of an impoſt, than a regular entablature would: its height may be one eighth of the height of the column.

Of the PROPORTIONS *of* ROOMS.

THE proportions of rooms depend in a great meaſure, on their uſe, and actual dimenſions: but with regard to beauty, all figures from a ſquare to a ſeſquialteral, may be employed for the plan. Inigo Jones, and other great architects, have ſometimes even exceeded this proportion, and extended the plan to a double ſquare: but the great diſparity between the width and length of this figure, renders it impoſſible to ſuit the height to both: the end views will appear too high, and the ſide ones too low.

IT may perhaps to ſome appear abſurd to make this objection; when galleries are frequently three, four, or five times as long as they are wide: but it muſt be obſerved, that, in this caſe, the extraordinary length renders it impoſſible for the eye to take in the whole extent at once; and therefore the compariſon between the height and length, can never be made.

THE heights of rooms depend upon their figure: flat ceiled ones may be lower than thoſe that are coved. If their plan be a ſquare, their height ſhould not exceed five ſixths of the ſide, nor be leſs than four fifths; and when it is an oblong, their height may be equal to their width. But coved rooms if ſquare, muſt be as high as broad, and when oblong, their height may be equal to their width; more one fifth, one quarter, or even one third, of the difference between the length and width: and galleries ſhould, at the very leaſt, be in height one and one third of their width, and at the moſt, one and a half, or one and three fifths. Theſe proportions are all perfectly good, as they obviate any idea of confinement, and, at the ſame time, render it practicable, for thoſe who are in the room, to examine the figure and ornaments of the ceiling, without either pain or difficulty.

IT is not, however, always poſſible to obſerve exactly theſe proportions. In dwelling houſes, the height of all the rooms on the ſame floor is generally the ſame, though their extent be different; which renders it extremely difficult in large buildings, where there are a great number of different ſized rooms, to proportion all

of them well. The uſual method, in buildings where beauty and magnificence are preferred to œconomy, is to raiſe the halls, ſalons, and galleries, higher than the other rooms, by making them occupy two ſtories: to make the drawing rooms, or other largeſt rooms, with flat cielings: to cove the middle ſized ones a third, a quarter, or a fifth of their height, according as it is more or leſs exceſſive: and in the ſmalleſt apartments, where even the higheſt coves are not ſufficient to render the proportion tolerable; it is uſual to contrive mezzanins above them: which afford ſervants lodging rooms, baths, powdering rooms, wardrobes, and the like; ſo much the more convenient, as they are near the ſtate apartments, and of private acceſs. The Earl of Leiceſter's houſe at Holkham, is a maſter-piece in this reſpect; as well as in many others: the diſtribution of the plan, in particular, deſerves much commendation; and does great credit to the memory of Mr. Kent: it being exceedingly well contrived, both for ſtate and convenience. And, with regard to the whole interior decoration, it may certainly vie, in point either of magnificence, or taſte, with any thing now ſubſiſtent in England.

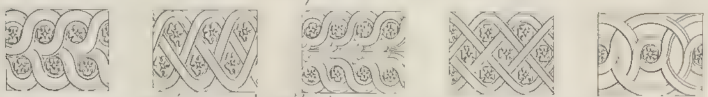
SINCE writing the above, thirty years have elapſed; and a very different ſtile of decoration has been introduced: which, for richneſs and neatneſs of execution, far ſurpaſſes any thing done at that time. The executive powers of our workmen are certainly much improved; yet, it is far from certain, that the taſte is better now, than it was then. That ſtile, though ſomewhat heavy, was great; calculated to ſtrike at the inſtant; and although the ornaments were neither ſo varied, nor ſo numerous as now; they had a more powerful effect: becauſe more boldly marked, leſs complicated in their forms, and leſs profuſely applied. They were eaſily perceptible without a microſcope, and could not be miſtaken for filigrane toy work. Content with the ſtores, which the refined ages of antiquity had left them, the architects of that day; ranſacked not the works of barbarous times; nor the port-folios of whimſical compoſers; for boyiſh conceits, and triflingly complicated ornaments.

THE coldneſs of our Engliſh climate, and the frugality of thoſe who build; are ſtrong objections to high rooms: ſo that we frequently ſee the moſt magnificent apartments, not above fifteen, ſixteen, or at moſt eighteen foot high; though the extent of the rooms would require a much more conſiderable elevation. This practice is however not to be imitated, where beauty, or effect are aimed at. There are many good expedients for warming rooms, however ſpacious or lofty; and to conſider expence, in that particular alone, is an ill judged piece of parſimony; as it renders all other expence employed in the decoration of the room, ineffectual.

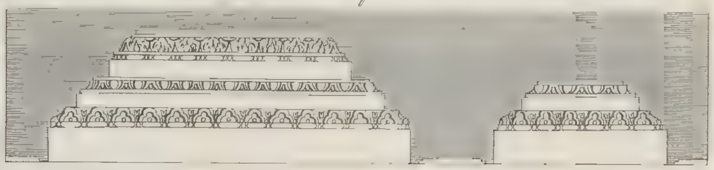
WHEN rooms are adorned with an entire order, the entablature ſhould never exceed one ſixth of the whole height, nor be much leſs than one ſeventh in flat ceiled rooms; and one ſixth or ſeventh of the upright part in ſuch as are coved. And, when there are neither columns nor pilaſters in the decoration, but an entablature alone; its height ſhould not be above one ſeventh or eighth of theſe heights. If rooms are finiſhed with a ſimple cornice, it ought never to exceed one fifteenth, nor ever be leſs than one twentieth part of the abovementioned heights: and when there is a frize added to the cornice, with an aſtragal or other mouldings under it, as is ſometimes cuſtomary; the whole height of theſe, together with the cornice, ſhould never exceed one eighth of the upright height of the room. In general, all profiles

Ornaments for Ceilings —

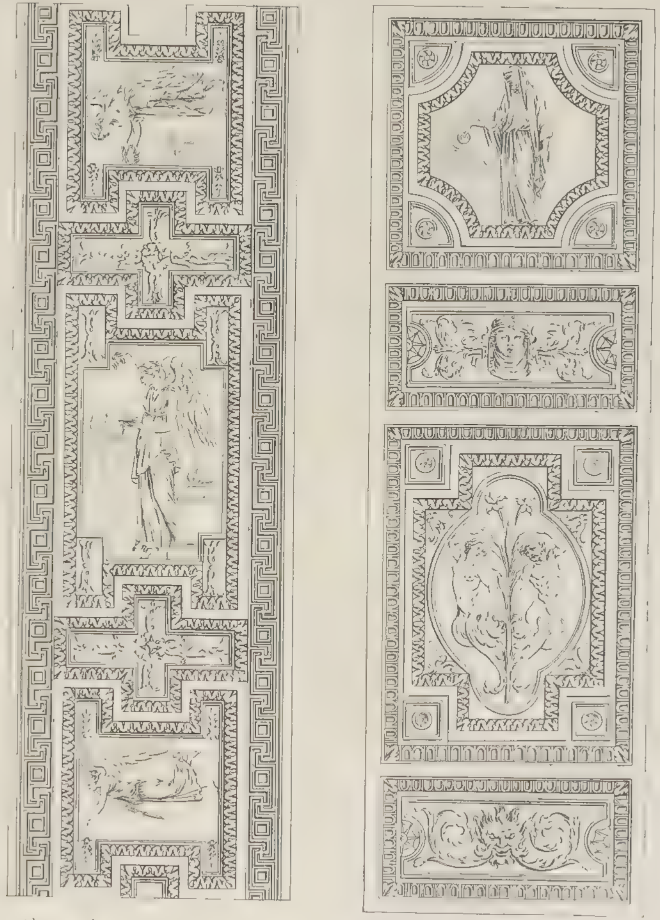
Enrichments for a Flat Ceiling



Frets, or Guilloches of Various Sorts



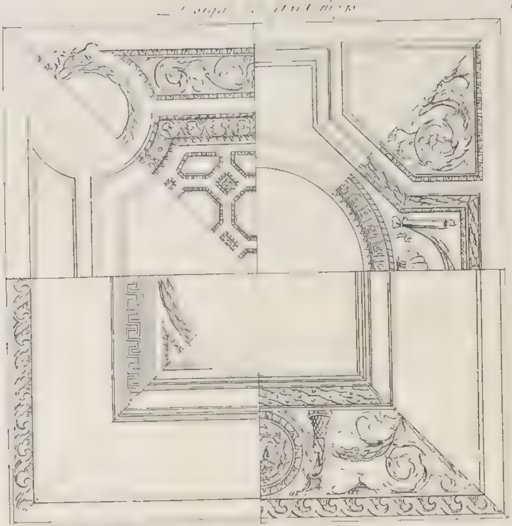
Profile of the Ceiling above :



Enrichments for Soffits of Arches, or Arcs Doubleaux

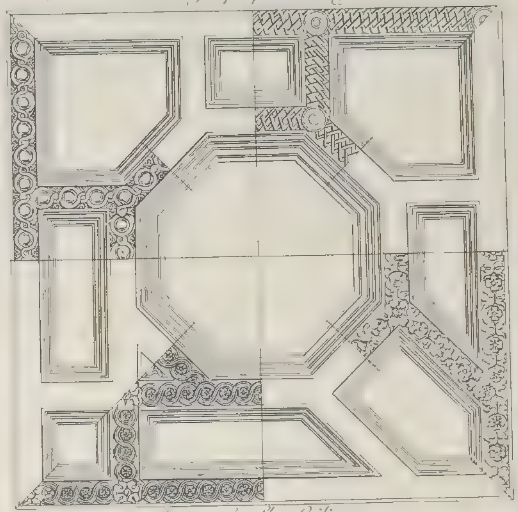
Ornaments for Ceilings.

Designs for Coved Ceilings.

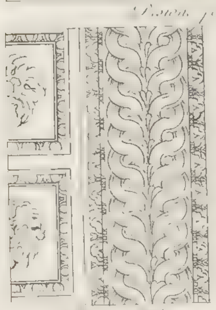


Designs for Coved Ceilings.

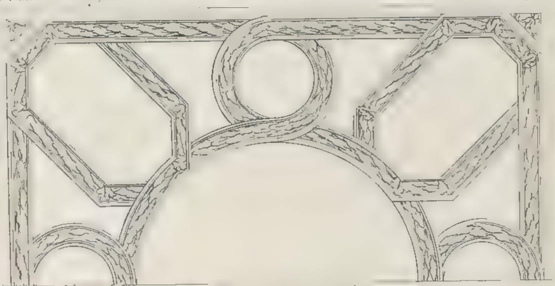
Designs for flat Ceilings.



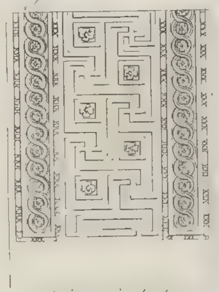
Designs for flat Ceilings.



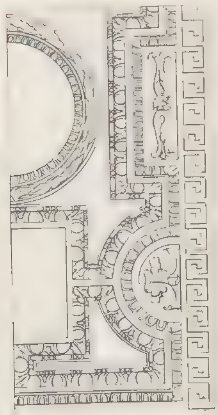
Soffits of [illegible]



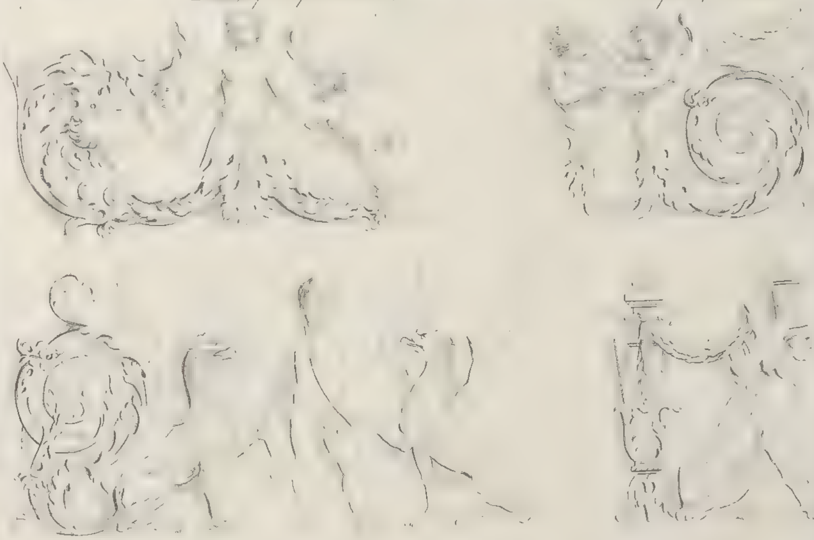
Designs for a flat Ceiling



Soffits of Arches



Soffit of the Door



Various Ornaments for the Compartments of Ceilings.

profiles within a building, muſt be more delicate than thoſe on the outſide: the architraves of the doors and windows ſhould never exceed one ſixth of the breadth of the aperture; on moſt occaſions, one ſeventh will be ſufficient; and all other parts muſt be diminiſhed proportionably.

Of CIELINGS.

CIELINGS are either flat, or coved in different manners. The ſimpleſt of the flat kind are thoſe adorned with large compartments, either let into the cieling or being flush with its ſurface, and ſurrounded with one or ſeveral mouldings, as repreſented in the firſt, ſecond, and tenth, figures of the firſt plate of cielings: and when ſome of the mouldings which ſurround the compartments are enriched, and ſome of the compartments adorned with well executed foliages, or other ſtucco or painted ornaments, ſuch cielings have a very good effect; they are very proper for common dwelling houſes, and for all low apartments. Their ornaments and mouldings do not require a bold relief, but being near the eye, they muſt be finiſhed with taſte and neatneſs. For higher rooms, the kind of flat cielings repreſented in the third, fourth, ſeventh, and eighth figures, of the ſame plate; and in one of the figures of the ſecond plate, are more proper; as they have a much bolder relief. The uſe of theſe is frequent, both in Italy and England. They ſeem to be compoſed of various beams, framed into each other, and forming compartments of different geometrical figures. The deſigns which I have given, are all for ſquare cielings: but oblong, or thoſe of any other form, may be comparted in the ſame manner; the figures of the compartments being varied according to the fancy of the compoſer, and made either polygonal, circular, or ellyptical. The ſides of the beams forming theſe compartments, are generally adorned with mouldings; and repreſent, either a ſimple architrave, or an architrave cornice, according to the ſize of the compartments, and the height of the room. Sometimes the larger compartments are deeper than the ſmall ones, with which they are accompanied, and ſurrounded with a fuller profile: as in the flat cieling of the ſecond plate; which is a deſign of Baldaſſar Peruzzi, executed in the veſtibule of the Maſſimi Palace at Rome. The ſoffits of the beams are ſeldom left plain, but are adorned with *Guillochis* or frets of various kinds, of which I have given a good number of deſigns in the firſt and ſecond plates of cielings: and when the utmoſt degree of richneſs in the decoration is aimed at, the ground of the compartments is likewiſe adorned; either with paintings, or with baſſo relievos, repreſenting groteſque figures, foliages, feſtoons, tripods, vaſes, and the like; of which there are ſome deſigns in the firſt plate of cielings.

COVED CIELINGS are more expenſive than flat ones; but they are likewiſe more beautiful, ſuſceptible of a greater variety of decorations, and in general, more ſplendid. They are promiſcuouſly employed in large or ſmall rooms, and occupy from one fifth to one third of the height of the room, according as that height is more or leſs conſiderable. If the room is low in proportion to its width, the cove muſt likewiſe be low; and when it is high, the cove muſt likewiſe be ſo: by which means the exceſs of height will be rendered leſs perceptible. But, where the

architect is at liberty to proportion the height of the room to its ſuperficial dimenſions, the moſt eligible proportion for the cove, is one quarter of the whole height. In parallelogram figured rooms, the middle of the cieling is generally formed into a large flat pannel; as in the fifth and ſixth figures of the firſt plate of cielings; which is either left plain, or painted; adorned with coffers and roſes, or compartments, or with groteſque ornaments; according as the decoration is to be rich or ſimple. This pannel, with the border that ſurrounds it, may occupy from one half to three fifths of the breadth of the room. The form of the cove is, generally, either a quadrant of a circle, or of an ellypſis, taking its riſe a little above the cornice, and finiſhing at the border ſurrounding the great center pannel; that ſo the whole curve may be ſeen from the end of the room. This border is made to project ſomewhat beyond the cove on the outſide, and on the ſide towards the pannel, it is uſually made of a ſufficient depth to admit the profile of an architrave, or of an architrave cornice.

THE coved part of the cieling, may either be left plain, as in one of the abovementioned deſigns; or adorned, as in the other; either, in the manner there repreſented, or in any other of the ſame kind; or elſe with coffers of different polygonal figures, of which there is a great variety in the third plate of cielings; very proper, both for this purpoſe, and likewiſe to adorn flat cielings.

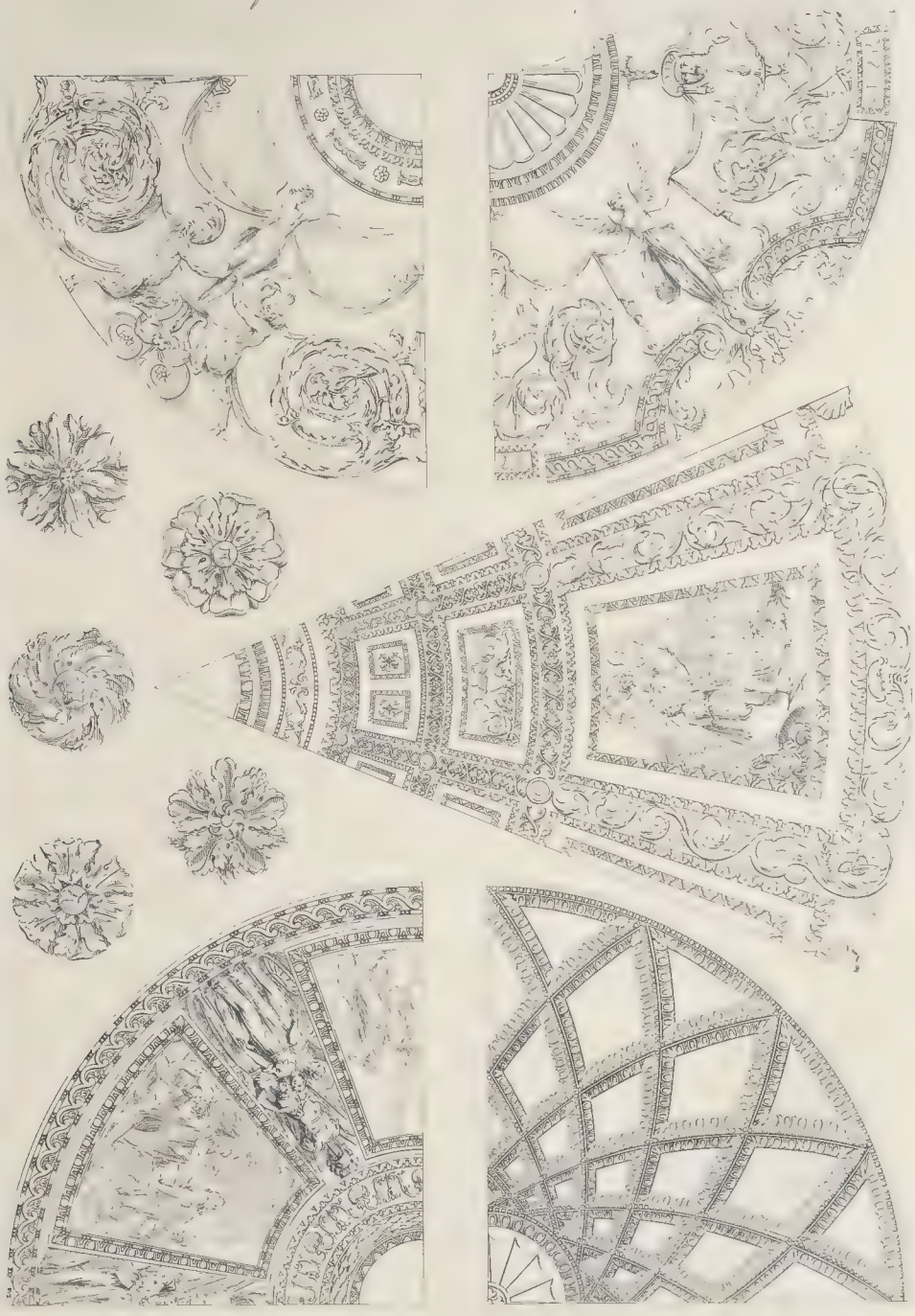
IN England, circular rooms are not much in uſe: but they are nevertheleſs very beautiful. Their height muſt be the ſame as that of ſquare rooms: their cielings may be flat, but they are handſomer when coved, or of a concave form, whether of a ſemi-circular, or ſemi-ellyptical profile. In the fourth plate of cielings, I have given five different deſigns for them, compoſed by M. Angelo, Bartolomeo Amanato, Baldaſſar Peruzzi, and Algardi: they are executed in the Capitol, the Mattei Palace, and the villa Pamphilia at Rome. Moſt ſorts of compartments and coffers are likewiſe very proper for theſe circular coves; as well as for coves of octagonal, or other polygonal plans.

Arcs Doubleaux, or, as Mr. Gibbs calls them, ſoffits of arches, are frequently enriched. When narrow, their ornaments conſiſt of *Guillochis* or frets: but when broad, they are adorned in a variety of different manners. I have given ſeveral deſigns of them compoſed by Raphael, Amanato, and M. Angelo, which are executed at St. Peter's, at the Pallazzo Mattei, and the villa Madama near Rome.

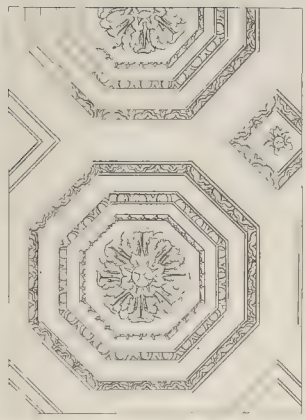
WHEN the profiles, or other parts of a room are gilt, the cieling muſt likewiſe be ſo; and that, full as profuſely as the reſt. The uſual method here, is to gild all the ornaments, and to leave the grounds white, pearl, ſtraw colour, light blue, or of any other tint proper to ſet off the gilding and ornaments to the beſt advantage: but I have frequently ſeen that practice reverſed with more ſucceſs, by gilding the grounds, and leaving the foliages white, party-coloured, or ſtreaked with gold.

IT requires much judgment, to diſtribute either gold or colours properly. Great care muſt be taken not to leave ſome places dull or bare, while others are ſo much covered, that they appear like lumps of gold, or beds of gaudy flowers: in general, it is to be obſerved, that wherever the gilding or colouring, tends in the leaſt, to confuſe

Ornaments for Circular Coved Ceilings &c. &c.

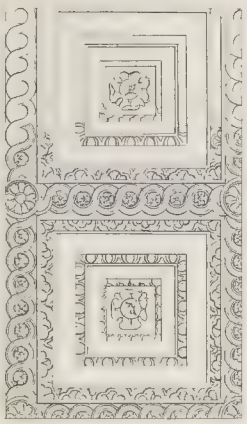


Compartments for Coved Ceilings.

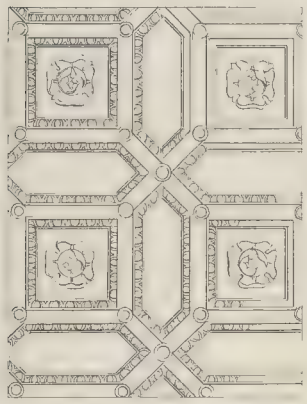


Octagons and Squares.

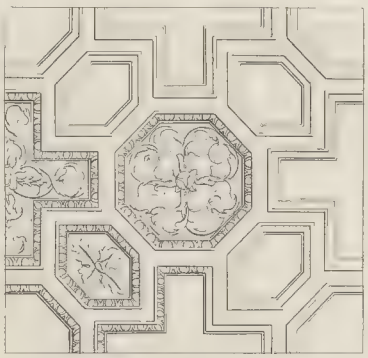
Hexagons and Lozenges.



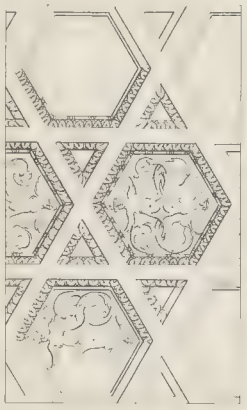
Squares with Enriched Borders.



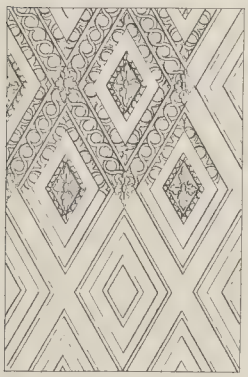
Squares Octagons & Hexagons.



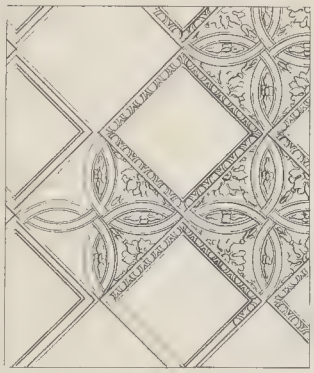
Octagons, Hexagons and Crosses.



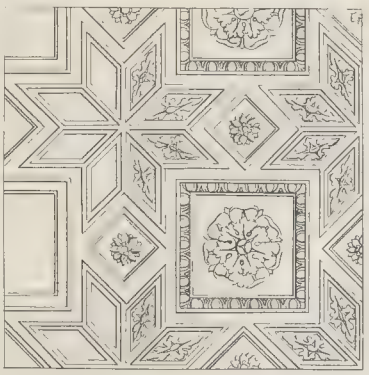
Hexagons & Triangles.



Lozenges with Enriched Borders.



Squares & Enwreathed Circles.



Squares & Stars with Chevrons &c.

confuſe the deſign, to give it a clumſy appearance, or to render the outline of any part indiſtinct; they are certainly ill employed.

PAINTED CIELINGS, which conſtitute one of the great embelliſhments of Italian and French ſtructures, and in which, the greateſt maſters have diſplayed their utmoſt abilities; are not in uſe among us. For one cannot ſuffer to go by ſo high a name, the trifling, gaudy, cielings now in faſhion: which, compoſed as they are of little rounds, ſquares, octagons, hexagons and ovals; excite no other idea, than that of a deſert: upon the plates of which are diſhed out, bad copies of indifferent antiques. They certainly have neither fancy, taſte, ſplendour, execution, nor any other ſtriking quality to recommend them. But ſhould the true ſtile of ſuch compoſitions ever come into faſhion, we might hope to ſee hiſtory painting flouriſh in England. Till then, it cannot reaſonably be expected, while religion has baniſhed pictures from churches, and the prejudices of connoiſſeurs have excluded modern paintings from our houſes.

IT muſt however be allowed, that, ſince the firſt publication of this book, the art of painting has taken a very different turn. At that time, little encouragement was afforded to any, but portrait painters; and to confeſs the truth, very few, even of theſe, deſerved much to be encouraged: but the inſtitution of a Royal Academy for the regular inſtruction of artiſts; the eſtabliſhment of an exhibition under royal patronage, in which they are admitted to ſtand competitors for fame, with thoſe moſt famed: the encouragement held forth to them by His Majeſty, the nobility, the gentry, and even by ſome of their own profeſſion: has rouſed the genius, of our Engliſh artiſts; ſtimulated their ambition; brightned up their proſpects. Many of them now vie with the firſt of their cotemporaries in Italy, in France, or elſewhere: and ſhould encouragement become yet more generally diffuſed; it might reaſonably be conjectured, from the rapid ſtrides already made towards perfection; that in the courſe of a few years, the Engliſh ſchool might aſpire to ſtand unrivalled: or be at leaſt equal in fame, to any other of its time.

I HAVE now gone through the principal branches of the decorative part of architecture, which was all originally intended; my purpoſe having then been to reſerve for a future occaſion, whatever related to the convenience, ſtrength, or economical management of buildings. Ignorant how far I might be equal to the taſk undertaken, it ſeemed preſumptuous to come upon the publick with a bulky performance; poſſibly of no merit: and it would have been imprudent to riſque my own fortune, in a buſineſs which might have been ruinous to me, without being profitable to others. What then was publiſhed, I offered as a ſpecimen of that which was farther intended, determined to be ruled by its reception, either to proceed or to deſiſt.

THE conciſe manner in which it has been attempted to treat the ſubject of the preſent publication, will, it is hoped, be ſome inducement to perſons of diſtinction, to peruſe the performance: and if the precepts are as clear and ſatisfactory, as the author intended; the work may be of uſe, even to gentlemen; travellers in particular; moſt of whom, from utter ignorance in architecture, as well as in other arts; have heretofore loſt half the fruits of their journies, returned unacquainted with the

moſt valued productions of the countries they had viſited; and perfectly diſſatisfied with expeditions, from which they had derived very little uſeful inſtruction, or real amuſement.

DESIGNS *for* CASINES, TEMPLES, GATES, DOORS, &c.

IN the firſt and ſecond plates, are the elevation and plans of a caſine erected at Marino, a villa belonging to the Earl of Charlemont, near Dublin.

THIS deſign was originally one of the end pavillions of a conſiderable compoſition, made ſoon after my return from Italy, for Edwyn Laſcells, Eſq; now Lord Harwood: which, among many others, his Lordſhip procured for Harwood Houſe. The ſame compoſition, with conſiderable variations, was afterwards wrought to the extent of a palace, for Her late Majeſty, the Dowager Queen of Sweden. The only part however, of either of the large deſigns which has been executed, is the preſent little publication, which was built by Mr. Verpyle with great neatneſs and taſte, after models made here and inſtructions ſent from hence.

IN the third plate are the plans and elevation of a caſine, built ſome years ago at Wilton, the ſeat of the Earl of Pembroke in Wiltſhire. It conſiſts of a ſmall ſalon and portico above, and of a little kitchen or ſervants waiting room below.

IN the fourth plate is the elevation of a hunting pavillion, deſigned many years ago for the Earl of Aileſbury: then Lord Bruce.

IN the fifth plate is a plan of the ſaid pavillion, and alſo of a kind of circular monopteros temple with two rooms adjoining to it, compoſed originally for Henry Willoughby, Eſq; now, Lord Middleton. The deſign was afterwards conſiderably augmented in its plan, and contrived for the reception of ſtatues and other valuable antiquities, belonging to the Earl of Charlemont's collection at Marino.

THE ſixth plate, exhibits an elevation of the ſaid circular monopteros compoſition.

IN the ſeventh plate are the elevation and plan of an octagon Doric temple, deſigned while at Florence, for the late Earl of Tylney: and propoſed to be executed in his Lordſhip's gardens at Wanſtead.

THE eighth plate exhibits the ſame diſpoſition, decorated in a different manner.

IN the ninth plate are deſigns of a Corinthian proſtyle temple, made for Her late Royal Highneſs the Princeſs Dowager of Wales, and propoſed to be erected in the gardens of Kew.

IN

In the tenth plate are the plan and elevation of a deſign made for Sir Thomas Kennedy, late Earl of Caſſils, with intention to be erected at his Lordſhip's ſeat in Scotland.

In the eleventh plate are the plan and elevation of a mauſoleum to the memory of Pope, Gay, and Swift; deſigned for Kew Gardens.

In the twelfth plate are two doors deſigned by Andrea Palladio, and ſerving as entrances to a garden near the Theatre at Vicenza.

In the thirteenth plate is a Tuſcan gate, imitated from one deſigned by Palladio, which ſerves as a back entrance to the Publick Garden at Vicenza. I have executed nearly the ſame deſign with additions at Blenheim: where it ſerves as the principal entrance to the kitchen garden.

In the fourteenth plate is the principal front and plan of a triumphal arch, compoſed by me, and executed under my direction at Wilton.

In the fifteenth plate are deſigns of a ruſtick Tuſcan gate, imitated from Inigo Jones's York Stairs. An ancient inſcription was by miſtake put into the tablet, which could not be effaced without ſpoiling the plate. I have ſince executed nearly the ſame deſign in the embankment of Somerſet-Place, with the addition of lions over the columns of the order, medallions and vaſes in the ſide intercolumniations, and pedeſtals under the columns: which, with the ſteps down to the Thames, conſiderably improve and augment the conſequence of the compoſition.

In the ſixteenth plate is a deſign made by deſire of his Grace the Duke of Richmond, for an entrance to Privy Garden, Whitehall.

In the ſeventeenth plate is a tripod, deſigned for his Grace the Duke of Marlborough, executed by Mr. Witton in Portland ſtone, and erected in the gardens at Blenheim.

In the eighteenth plate are various ornamental utenſils, deſigned for the Earl of Charlemont, for Lord Melbourne, and for ſome decorations in my own houſe.

In the nineteenth plate are two deſigns of chimney pieces, the one intended for Windſor Caſtle, the other for Melbourne Houſe in Piccadilly.

A twentieth plate was deſigned, and partly engraved; it conſiſted of ornamental utenſils, invented for their Majeſties, for his Grace the Duke of Marlborough, and for the Royal Academy. But the engraver Mr. Charles Grignion, finding it would have required more time to finiſh in the manner he wiſhed, than his other avocations would afford, declined to proceed: and the impoſſibility of finding an equally able ornamental hand, to finiſh what he had ſo well begun, obliged me, though very reluctantly, to lay the publication aſide.

F I N I S.

DIRECTIONS to the BINDER.

The PLATES repreſenting

PRIMITIVE BUILDINGS muſt front page 1. Regular Mouldings, &c. p. 3. Orders of the Ancients, &c. p. 8. Tuſcan Order, p. 15. Doric Order, p. 17. Doric Entablatures, p. 21. Ionic Order, p. 23. Goldman's Volutes, p. 24. Ionic Entablatures, p. 25. Compoſite Order, p. 26. Compoſite Entablatures, and Capitals, p. 28. Corinthian Order, p. 29. Pilaſter Capitals, p. 31. Perſians and Caryatides, p. 36. Intercolumniations, p. 42. Arches without Pedeſtals, p. 46. Arches with Pedeſtals, p. 48. Various Sorts of Arcades, p. 50. Columns upon Columns, p. 51. Arches upon Arches, p. 54. Pediments, &c. p. 58. Baluſters, p. 61. Gates and Piers, p. 63. Doors, p. 65. Four Windows, p. 69. Nine Windows, p. 71. Six Windows, p. 72. Deſigns for Chimney Pieces, p. 77. Lord Charlemont's Chimney Pieces, p. 79. Profiles for Doors, &c. p. 80. Ornaments for Flat Cielings, and for the Compartments of Cielings, p. 83. Enrichments for a Flat Cieling, and for Soffits of Arches, &c. p. 84. After which the Plate of Compartments, for Coved Cielings; and then that of Ornaments for Circular Coved Cielings.

Order of the DESIGNS at the End of the Book.

1ſt. Elevation of Lord Charlemont's Caſine. 2d. Plans of the ſame. 3d. Lord Pembroke's Caſine. 4th. Elevation of Lord Bruce's Caſine. 5th. Plan of the ſame, and of Mr. Willoughby's Temple. 6th. Elevation of Mr. Willoughby's Temple. 7th. Lord Tilney's Temple. 8th. Deſign inſcribed to I. Hall Stevenſon, Eſq; 9th. Deſign inſcribed to T. Worſley, Eſq; 10th. Earl of Caſſel's Deſign. 11th. Deſign inſcribed to Sir Charles Hotham, Bart. 12th. Deſign inſcribed to Robert Wood, Eſq; 13th. Deſign inſcribed to the Hon. Mr. Ward. 14th. Lord Pembroke's Triumphal Arch. 15th. Deſign inſcribed to Thomas Brand, Eſq; 16th. Deſign inſcribed to his Grace the Duke of Richmond. 17th. Tripod. 18th. Ornamental Utenſils. 19th. Two Chimney Pieces for Windſor Caſtle and Melbourne Houſe.

To the Lord Viscount Charlemont

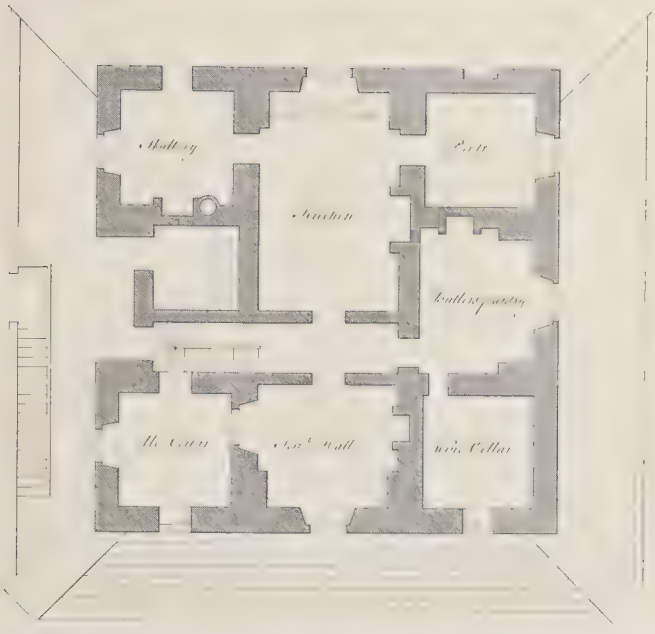
This Design of his Lordship's Casine at Marino,

is humbly Inscribed by his Lordship's

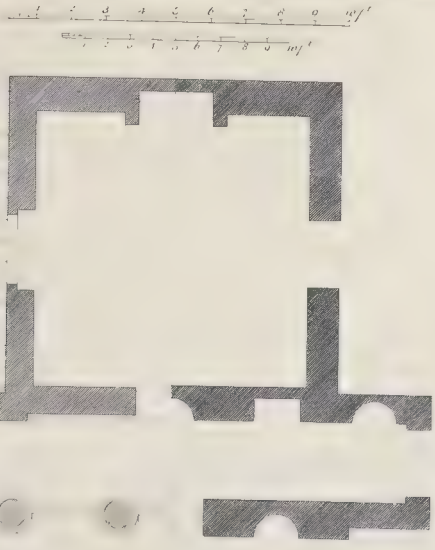
most Obedient Servant, William Chambers

Principal floor.

Cellar Story.

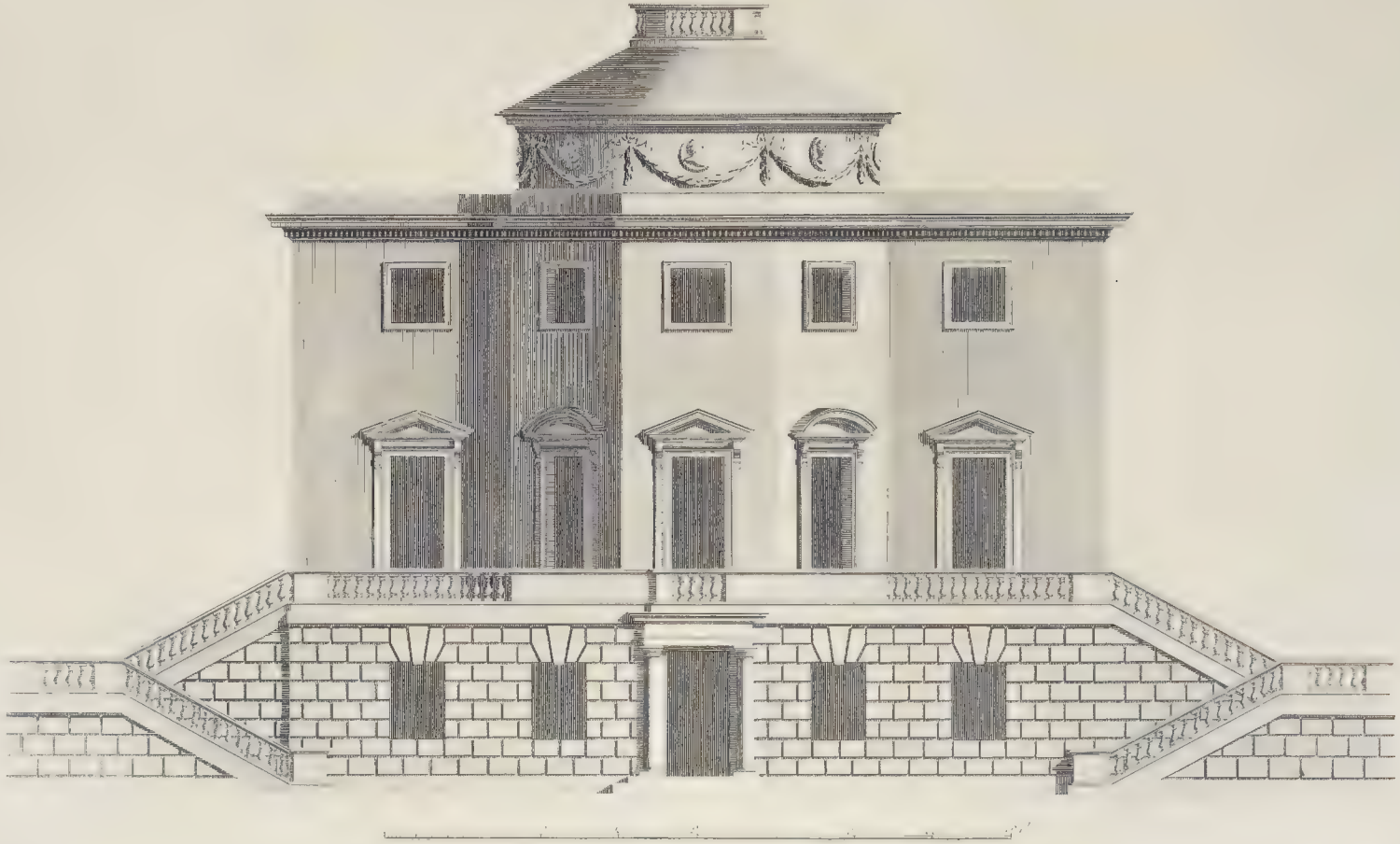


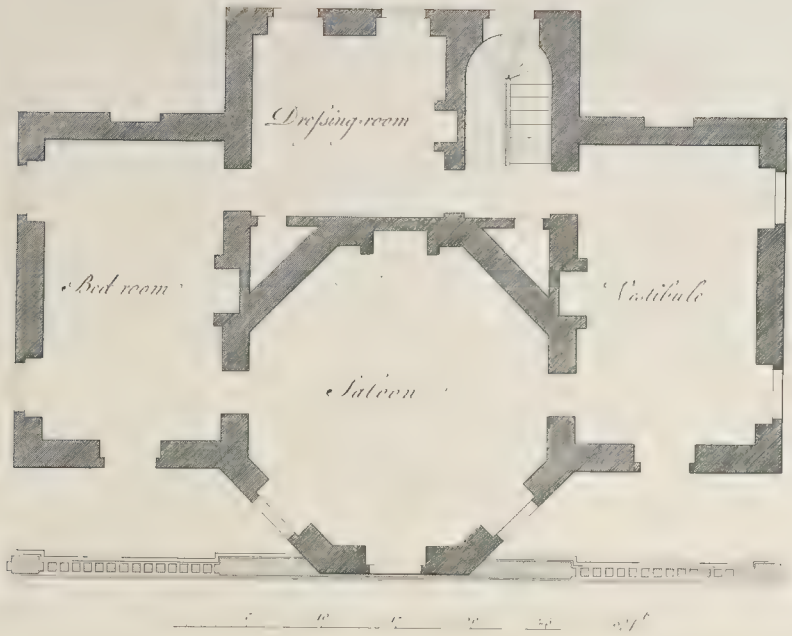
Plans of the Lord Viscount Chartemonts Villa at Marino



To the Countess of Pembroke, this Design of the Casine at Wilton is humbly Inscribed.
By her Ladyships most obedient Servant, William Chambers.

To Lord Bruce, this Design for the Casine at Tanfield Hall in Yorkshire, is humbly Inscribed
by his Lordships most Obedient Servant, William Chambers.





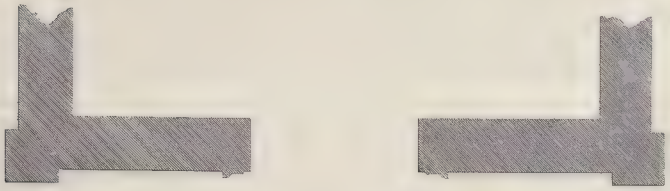
The principal Floor of Lord Bruce's Casine.

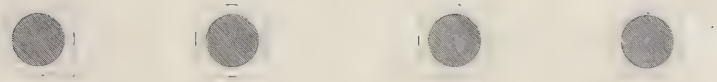
Plan of M.r Willoughby's Temple.

To Henry Willoughby Esq.r This Design is humbly Inscribed
by his most Obedient Servant William Chambers.

To the Earl of Tilney, this Design is humbly Inscribed
by his Lordships most Obedient Servant, William Chambers.

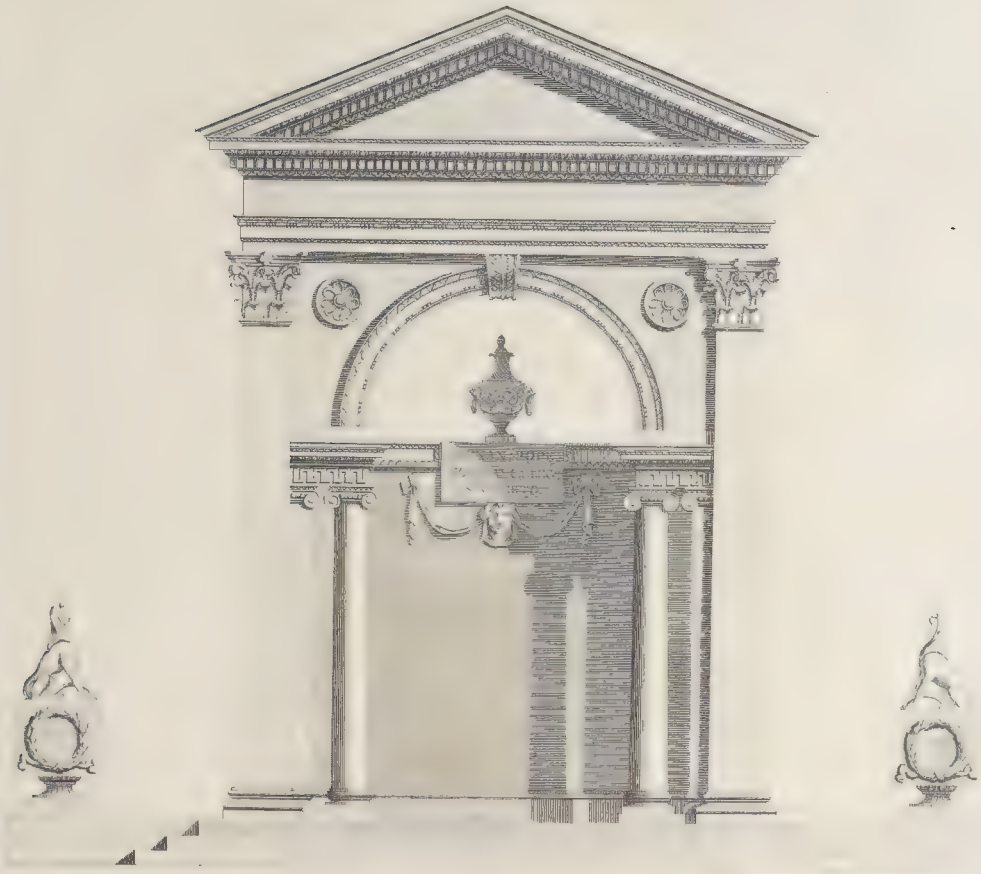
To John Hall Stevenson Esq.r this Design is humbly Ins[cribed]
by his most Obed.t & Servant William Cha[mbers]

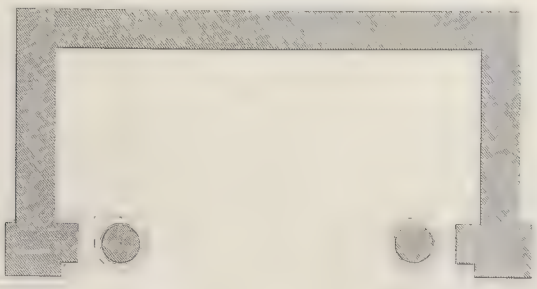




To Thomas Worsley of Hovingham [illegible]
by his most Obedient Servant

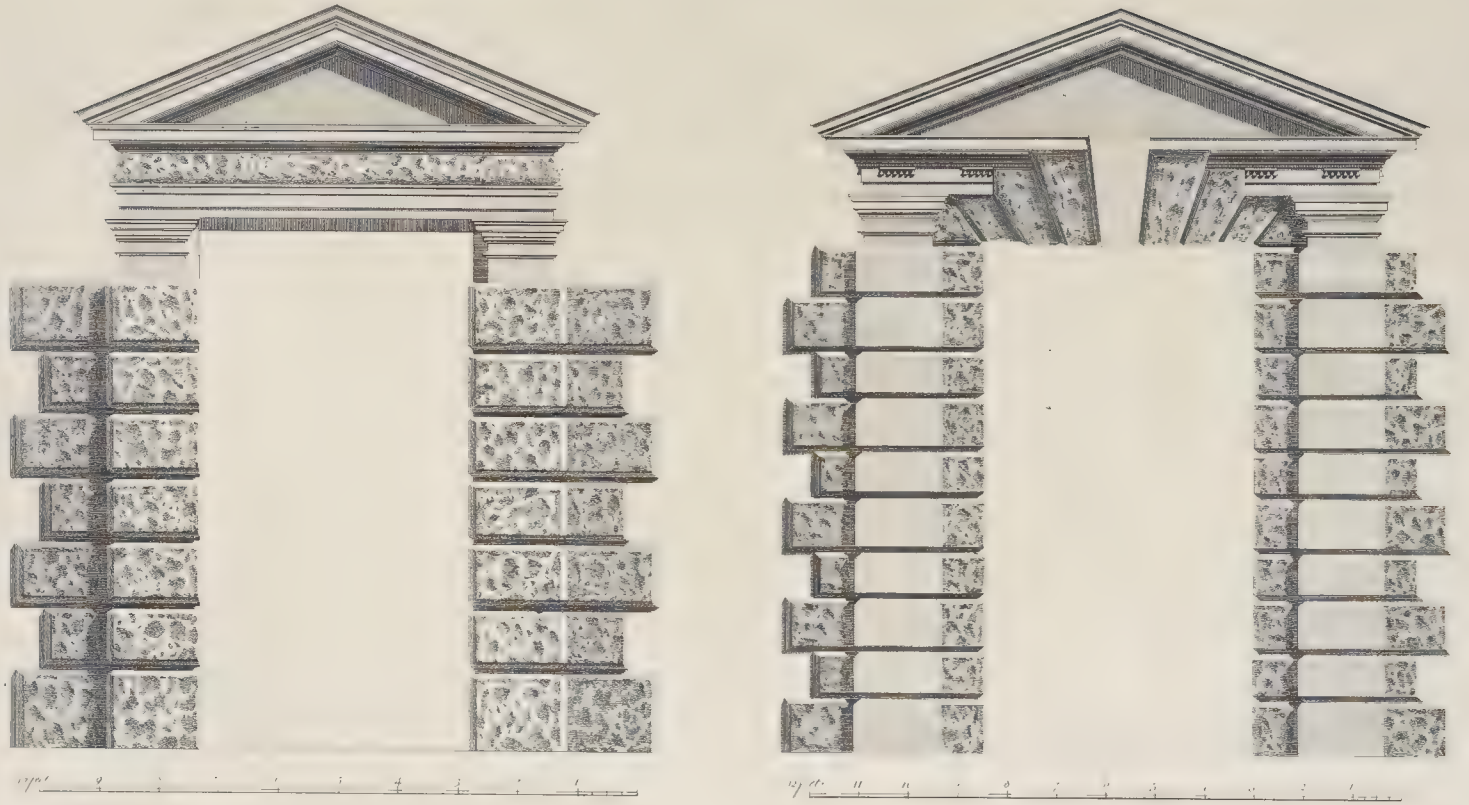
To S.r Thomas Kennedy of Cultean Bar.t This Design is humbly Inscrib.d
by his most Obedient Servant. William Chambers





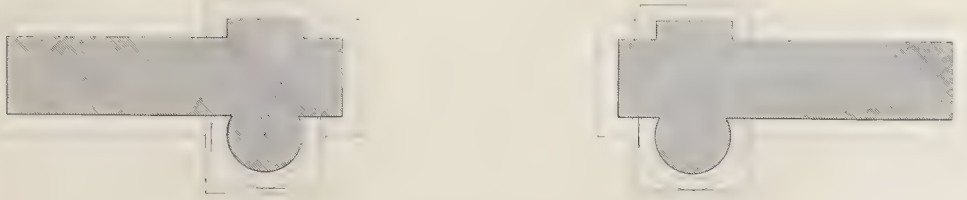
To Sr. Charles Hotham Bart. this Design is humbly Inscribed
by his most Obedient Servant Will.m Chambers.

Rustick Doors to a Garden, near the great Theatre at Vicenza.
By Andrea Palladio.



To Robert Wood Esq.r these Designs are humbly Inscribed by
his most Obedient Servant William Chambers.

F. Patton Sc.



To the Honourable M.r Ward, this Design
is humbly Inscribed by his most Obedient Servant W. Chamb.rs

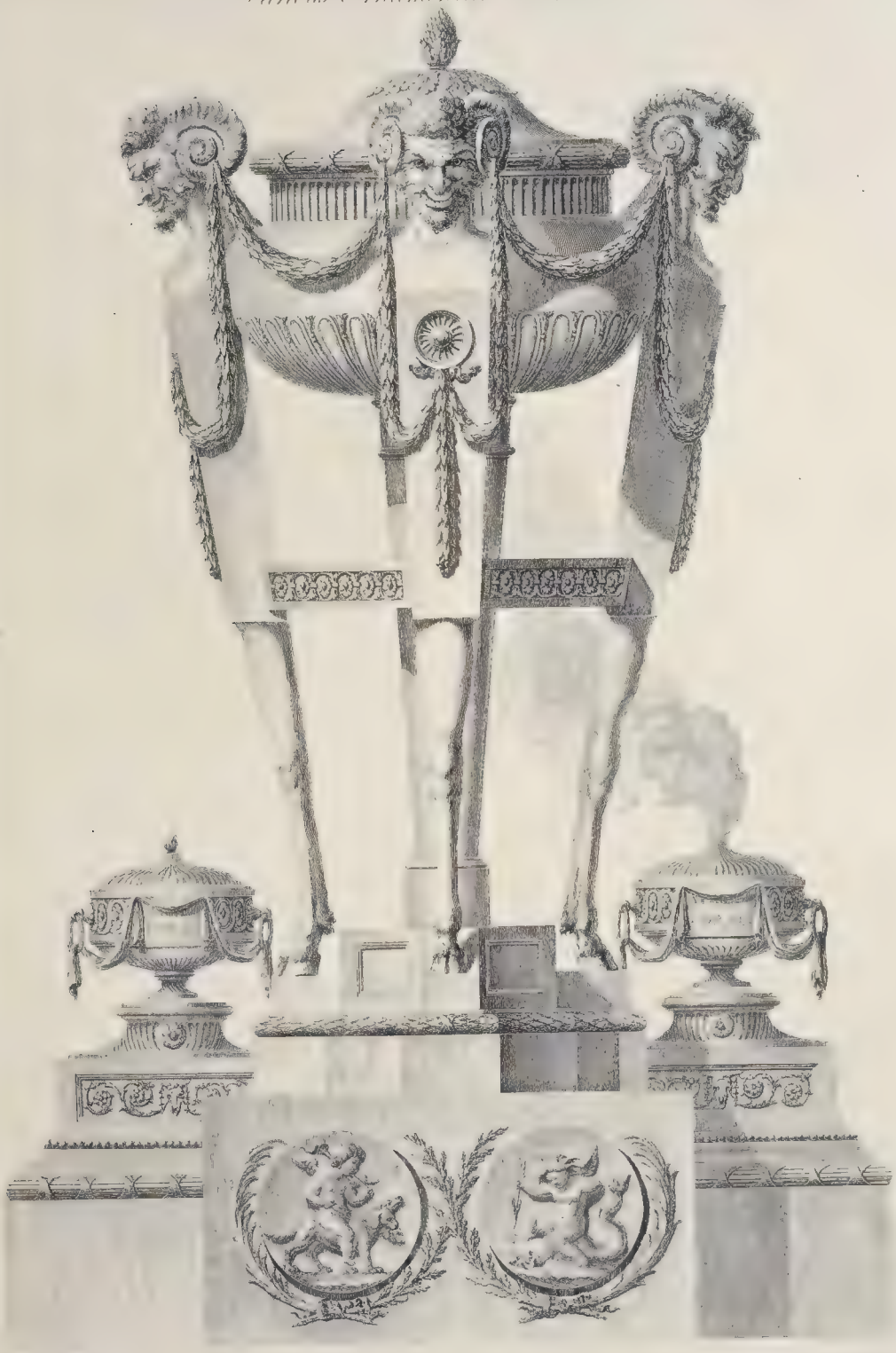
W. Chambers

To the Earl of Pembroke

This Design of the Triumphal Arch at Wilton, is humbly Inscribed by his Lordships most Obed.t Serv.t W.m Chamb.

To Thomas Brand of the Hoo in the County of Hertford Esq.r
this Plate is humbly Inscribed by his most obedient Servant Wm Chambers

[illegible] Duke of [illegible] this Design is humbly Presented
by his Grace's most Obedient Servant, William Chambers.



Various Ornamental Utensils.